

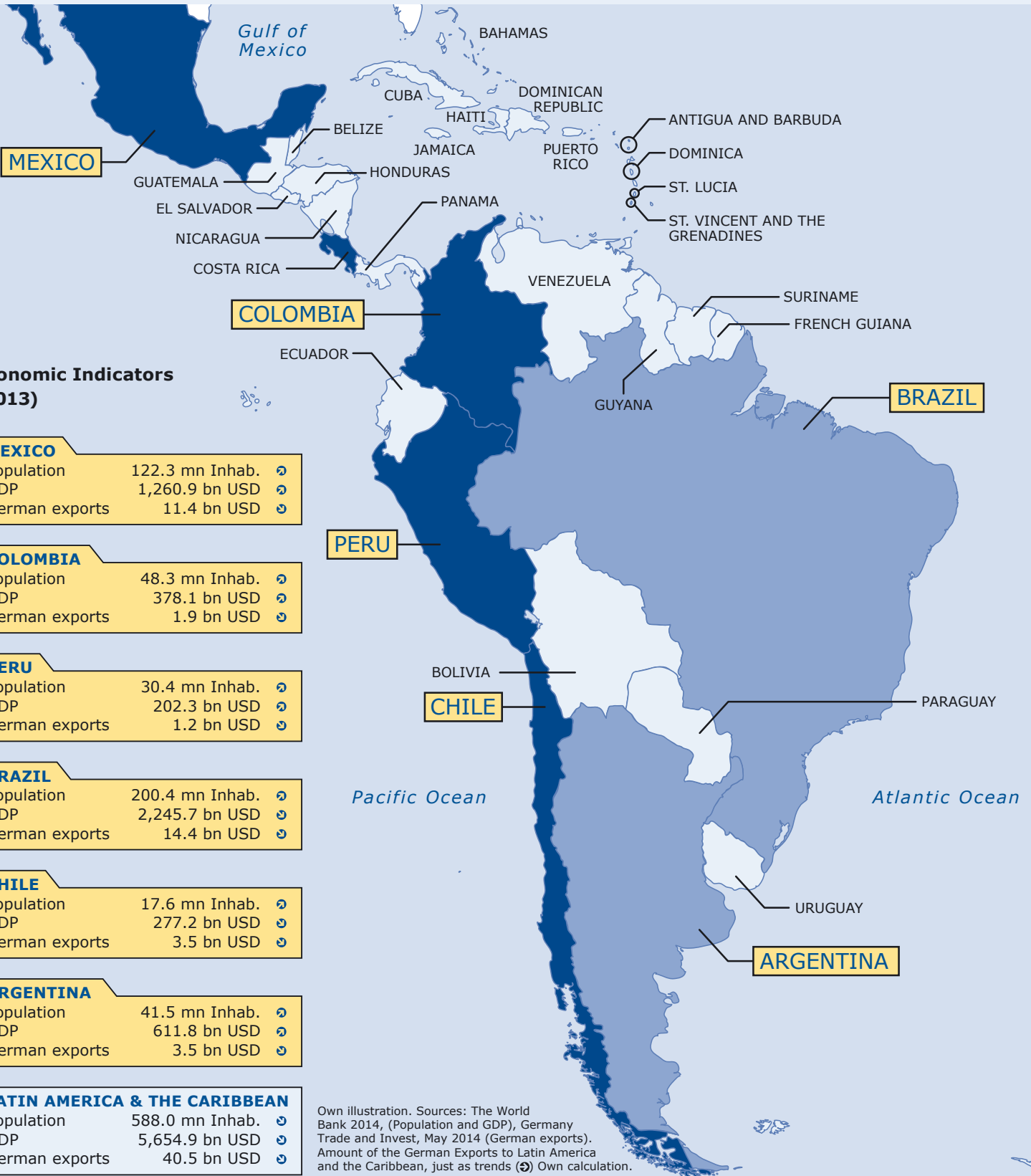


DIMENSIONS AND ECONOMIC EFFECTS OF THE PACIFIC ALLIANCE



Konrad
Adenauer
Stiftung

COUNTRIES IN LATIN AMERICA AND THE CARIBBEAN



DIMENSIONS AND ECONOMIC EFFECTS OF THE PACIFIC ALLIANCE

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I INTRODUCTION



For more than a century, Latin America has struggled to build an economic regional integration space in order to accelerate convergence towards welfare conditions seen in developed nations. Shared heritage, culture and the endowment of vast natural resources seemed to assure fruitful economic and political cooperation. Paradoxically, the region has in many occasions fallen victim to centrifugal forces leading to ill-conceived economic policies, backwardness and war. Regional economic integration has failed to produce the desired outcomes and has even often been the source of dissension. Now, after a decade of spectacular growth based on prudent macroeconomic policies and economic liberalization, Chile, Colombia, Costa Rica, Mexico and Peru have decided to work together to create an area where goods, services, capital and people can move freely within the alliance to create more welfare for their citizens and to enhance social and political stability within their nations. This is how the Pacific Alliance or Alianza del Pacífico (AdP) was born.

These liberalization efforts take place in and are driven by a changing global world trade order. The United States of America, which has traditionally thought of Latin America as its zone of political influence, is currently negotiating free trade agreements with the European Union (TTIP – Transatlantic Trade and Investment Partnership) and with countries in Asia and Latin America bordering the Pacific Ocean (TPP – Trans-Pacific Partnership). In Asia, the 10 member states of the Association of Southeast Asian Nations (ASEAN) are involved in enhancing regional economic integration through the ASEAN Economic Community and in negotiating a regional and comprehensive economic partnership (RCEP) agreement with China, India, Japan, Korea, Australia and New Zealand.

A key motivation of these regional initiatives is to provide the right governance for value chains that increasingly transcend national borders. Moreover, the inability of the World Trade Organization (WTO) to complete the

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Doha Round and to advance into so called 21st century trade topics (Baldwin, 2012) leaves countries willing to move ahead with little alternative than advancing the regional agenda. Finally, the fact that, in other regions of the world, mega regional trade agreements are forming, makes it more important for other countries to promote trade liberalization on their own.

This study aims at evaluating the gains from trade from the proposed trade integration between AdP countries. It differentiates between different depths of such an integration effort. Scenarios differ from abolishing bilateral tariffs only to a scenario of a medium level of integration where certain sensitive areas such as agriculture, food or services receive special treatment to an ambitious level of integration that provides deep trade liberalization in all areas. The study quantifies the potential trade creation and trade diversion effects of these different levels of integration as well as the effects on sectoral value added and on aggregate welfare. The study moves beyond the Pacific region and also investigates whether alternative trade policy strategies (like trade liberalization between AdP and MERCOSUR or a deep Latin American free trade area) would create extra gains from trade for the AdP countries.

In the following, we will start by taking stock of the state of regional integration in Latin America. We embed the emergence of the AdP into the larger historical and geographical context. We explain the institutional design of the agreement and present important data on the degree of regional integration.

II THE PACIFIC ALLIANCE: REGIONAL LATIN AMERICAN INTEGRATION OPEN TO THE WORLD



In the post-World War II era, Latin America has seen innumerable efforts to promote economic integration as a powerful way to promote economic development. While agriculture, mining, petroleum and service sectors dominated the bulk of economic activity in the first decades of the twentieth century, several countries had relatively important manufacturing activities primarily in the metalworking and basic machinery sectors that supplied the needs of commodity export activities along with other industries catering to the domestic market such as food and textiles. All of these business sectors and many others grew on the back of the disruption of trade flows that accompanied the two Great Wars and the Depression that started in 1929.

Economic integration in Latin America gained widespread support after the principles of import substitution industrialization (ISI) became central to development strategies throughout the region. ISI was heavily promoted in Latin America by the United Nations Economic Commission for Latin America (ECLA) with the intellectual support of Argentinian economist Raul Prebisch and of Celso Furtado from Brazil as well as of the German-born economist Hans Singer. The ISI thesis was considered the only way to catch-up with more developed countries and overcome what was then considered the inevitable deterioration of terms trade – the notion that with higher income levels would come an increased demand for manufactured goods relative to the price of primary products that made up the bulk of Latin America's exports. In addition, the rapid industrialization of the Soviet Union was seen as a benchmark for industrial policies to be implemented. These policies also placed great importance on the development of state-owned basic industries such as steel, electric power, railroads and the production of heavy machinery.

As opposed to what happened in countries like Korea where the protection of industries from foreign competition was accorded contingent to specific growth, exports and efficiency targets, Latin American countries engaged in

"Latin American countries engaged in widespread protection of the so-called infant industries for prolonged time periods with no indication given as to when protective barriers would be lifted."

widespread protection of the so-called infant industries for prolonged time periods with no indication given as to when protective barriers would be lifted.

This is the backdrop against which the initial regional integration schemes were created. In 1960, the Latin American Association for Free Trade (ALALC, Spanish acronym) was launched by Argentina, Brazil, Chile, Mexico, Paraguay, Peru and Uruguay, becoming the American Association for Integration (LAIA or ALADI) twenty years later with the inclusion of Colombia, Ecuador, Bolivia and Venezuela. Panama and Cuba would later join.

While the main stated goal of ALADI was that of "...creating an area of economic preferences with the final objective of establishing a common market in Latin America," it has mainly served as an instrument for the exchange of trade preferences between two or more member countries under the framework of the so-called *Acuerdos de Complementación Económica* (Economic Complementation Agreements), most of which are currently in place.

2.1 MERCOSUR AND ANDEAN COMMUNITY

"The most ambitious integration efforts in Latin America have been those of MERCOSUR and ANDEAN."

The most ambitious integration efforts in Latin America have been those of MERCOSUR (Common Market of the South) and the *Andean Community of Nations*, ANDEAN (or Comunidad Andina de Naciones, CAN, Spanish acronym). ANDEAN has had a haphazard history. It was established in 1969 by Bolivia, Chile, Colombia, Ecuador, and Peru and later joined by Venezuela. Its main objective was to create a single economic space where goods and services could flow freely amongst its members whilst being protected against foreign competition by a common external tariff. In reality, it meant replicating the industrial policies of individual members that still adhered to the tenets of ISI, now within a much larger economic space. In addition, ANDEAN pursued an array of different economic policies including industrial planning for various industries such as petrochemicals, automobiles, metalworking, steel, and chemicals among others. It also adopted common and mostly discriminatory rules for the treatment of foreign direct investment (FDI).

Throughout innumerable negotiation rounds, ANDEAN was unable to agree on criteria for establishing a common Andean tariff, while the many commitments to lower tariffs towards the establishment of a free trade zone were systematically subjected to delays or were routinely unfulfilled. By the mid-1970s Chile, which was pursuing a general liberalization of its economy, voiced severe objections to its partners' views on tariff levels and the treatment of FDI. These objections ended in Chile leaving ANDEAN in 1976. The advent of the debt crisis affecting Latin America in the 1980s posed additional negotiation difficulties, this time amidst balance of payment crises, fiscal deficits, and severe exchange rate misalignments in several member countries.

While ANDEAN has been able to survive as an institution, it has been vastly debilitated and unable to attain its original aim, particularly after Colombia and Peru started to adopt many of the liberalizing policies often referred to as those of the “Washington Consensus”. The announcement that Colombia and Peru intended to negotiate a Free Trade Agreement with the United States enraged Venezuelan President Hugo Chávez leading to Venezuela finally abandoning ANDEAN in 2006. It would later join MERCOSUR. Bolivia on the other hand, had similar misgivings about ANDEAN, being ideologically closer to MERCOSUR countries. Bolivia is currently in the process of formally adhering to that bloc albeit without leaving ANDEAN.

Despite all these difficulties, ANDEAN has been able to put into effect a free trade zone (FTZ) in 2005, although abandoning the idea of a customs union with a common external tariff. It has, however, developed a vibrant and successful financial arm, the Andean Development Corporation (CAF).

The significantly larger domestic markets of Brazil and Argentina have allowed MERCOSUR, whose six members total a population of 300 million and an aggregate GDP of approximately \$ 3,200 million, to build an important trading bloc albeit being relatively closed to the rest of the world. MERCOSUR has an external tariff according substantial effective protection against importable goods from non-member countries. It could thus be considered an imperfect customs union insofar that it still bestows member countries waivers from applying the common external tariff schedule on a number of tariff lines corresponding to “sensitive” products.

Most of the hurdles encountered by both ANDEAN and MERCOSUR during their formation as well as during the present circumstances have to do with the same problems. First and foremost their attempt to create trading blocs that were conceived as fortresses against third-country competing imports; second, their inability to coordinate macroeconomic policies; and finally the fact of having often undergone periods of domestic economic crisis and external economic shock. In addition, throughout their formative stages, member countries have changed essential elements of their economic policy models. For example, Peru went from being a closed economy to becoming the most open economy in Latin America; Argentina adopted for a decade a currency board, pegging its local currency to the dollar as a means of ending hyperinflation; Venezuela turned into a state-run planned economy; and Brazil undertook a vast monetary reform including the introduction of a new currency and the move from a fixed exchange rate regime to a floating one. Not surprisingly, all these factors have often resulted in severe clashes between member countries with debilitating consequences.

Not only economic factors have contrived against regional economic integration. Ideological and geopolitical elements have also played a crucial role in the design of regional trading blocs. The initiative of President George W. Bush to launch a Free Trade Area of The Americas (FTAA) was met with widely divergent reactions in Latin America. Countries like Chile, Colombia, Peru as well as most of Central America view FTAA as a shortcut to lock-in their long-term preferential access to the U.S. market unilaterally granted under the *Andean Trade Promotion and Drug Eradication Act*. Brazil, on the

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other hand, initially welcomed FTAA and participated in the negotiation meetings but later entered into conflict with the United States over several issues, notably U.S. domestic agricultural support prices and export subsidies. Other countries simply shunned the initiative equating it to nothing short of neo imperialism. Venezuela's Hugo Chávez, who soon commanded the establishment of the Bolivarian Alternative for the Americas (ALBA) was arguably the harshest critic. Bolivia, Cuba, Ecuador, Nicaragua, Venezuela and several small Caribbean countries remain members of this bloc, which was formally established at the end of 2004.

Thus, Latin America's efforts towards successful regional integration have been fraught with countless problems, from political instability and sharp swings in economic policies to the lack of a consistent vision to guide the design of its industrial policies. In the last 40 years, Chile has perhaps been the only country in the region able to adhere to consistent trade and industrial policies. This was clearly seen when Chile decided to preserve such policies during the democratic transition period that followed the end of the military rule of General Pinochet. This continuity in the direction of Chilean policies was put to test during the first tenure of President Bachelet as Brazil and Argentina tried to attract Chile to MERCOSUR. Chilean authorities clearly pointed to the difficulties of joining a bloc relatively closed to foreign competition and where member countries at the time still exhibited macroeconomic imbalances, as they said just to continue with "integrationist rhetoric". Chile went on to enhance trade relations with Latin America, NAFTA, the EU and Asia also as a tool to end the political isolation to which it was subjected during the Military Regime.

Undoubtedly, Mexico's trade policies have gained consistency since the coming into effect of the trilateral North America Free Trade Agreement (NAFTA) in 1994. On the other hand, the overwhelming importance of economic relations of Mexico within North America (almost 80% of exports go to the U.S.) has inevitably swayed the focus of Mexican trade relations away from Latin America. Nevertheless, Mexico has tried to increase its trade relations with Latin America and the Caribbean through the signing of many trade accords. Still, Mexico's trade south of its borders has remained limited and in the order of 7% of its total exports and less than 5% of its imports. In political terms, this scant commercial relation with countries that share the same heritage and culture remains a concern within Mexico.

2.2 THE PACIFIC ALLIANCE

By the end of the 2000s Latin American trade policies could be clearly seen separated into two somewhat divergent paths. On the one hand, all countries facing the Pacific (with the exception of Ecuador) had opted for what has been termed “open regionalism” as their economies underwent a substantial unilateral liberalization followed by the creation of wide-ranging FTA’s with the U.S. Other Countries, notably Chile, Mexico and Peru had entered into similar agreements with the EU and Asian countries and additionally, all three countries had become members of the Trans-Pacific Partnership (TPP) agreement and of the Asia-Pacific Cooperation (APEC) forum. Colombia later signed FTAs with the EU, Canada and Korea. Furthermore, Chile and Mexico are members of the Organization for Economic Development and Cooperation (OECD) and in 2013 Colombia launched its process for accession to the OECD. Peru has announced it will follow suit.

On the other hand, Brazil and its MERCOSUR partners, while engaging in trade negotiations with the U.S. and Europe, have so far remained committed to preserve their large aggregate domestic market as an essential element driving their trade policies. Moreover Brazil, as one of the seven largest world economies, rightly conceives its trade and international relations policies as intrinsically linked.

Considering the similarities in trade policies of many countries of the Latin American Pacific, Colombia proposed in 2006 the establishment of a forum for cooperation and coordination called *Arco del Pacífico* (Arc of the Pacific). The idea was endorsed by Chile, Mexico and Peru and in 2007 was formally established with the participation of Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Nicaragua, Panama and Peru. It failed because of a lack of commitment and divergence of trade policy interests. It was Peru’s President Alan Garcia who, in 2010, suggested that Chile, Colombia and Peru should start a process to build what he called a “profound integration” namely to go beyond the usual disciplines or chapters included in FTAs to include a deeper coordination of public policies, building upon the already existing similarities of such policies in the three countries. Garcia’s proposal was met with immediate enthusiasm by the other two presidents. Later, at the time when preliminary discussions were taking place, the Mexican government requested to join the Group and in April 2011 the Pacific Alliance was officially created in Lima.

Some diplomatic officials did privately express concerns about Mexican participation on the grounds that it could potentially slow down the profound integration originally envisaged. In fact, Mexico and Peru had previously experienced a protracted bilateral FTA negotiation. But the heads of state recognized that Mexico’s economic weight and its large market were crucial for the Alliance to start off with a critical mass. Mexico for its part, saw joining the Alliance as a way to enhance economic and political relations with Latin America while leveling the prominence of an ever more assertive Brazilian role in the region.

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"The open regionalism concept on which the Alliance is based as well as the political will that the leaders are wielding in its construction has elicited worldwide interest."

The stated objectives of the Alliance are the construction of an area within which there will be free movement of goods, services, capital and persons. At the same time, it seeks to "...promote the larger growth, development and competitiveness of the Parties' economies, aiming at attaining greater welfare, overcoming socio-economic inequality and achieving greater social inclusion of their inhabitants" and to "...become a platform for political articulation and economic and trade integration, and to project these strengths to the rest of the world, with a special focus on Asia-Pacific".

Negotiations within the Alliance have proceeded at a vertiginous pace. Since its inception in April 2011, the member countries have celebrated nine leaders' summits and negotiated two important agreements. The first of them is the Framework Agreement in June 2012, containing the legal bases that laid the foundations for the Pacific Alliance. The second was the signature of an Additional Protocol in February 2014.

The protocol regulates the establishment of a free trade zone among the AdP members. In terms of trade liberalization, it is important to point out, that the Pacific Alliance offers a small yet significant improvement vis-à-vis the agreements previously signed among its members. Bilateral FTAs among the AdP members had already liberalized over 92% of the total trade. The Pacific Alliance was built upon these achievements. Once the liberalization schedule is completed, over 99% of trade will be free of tariffs and duties. The Additional Protocol goes beyond tariff liberalization, to include the harmonization of rules of origin, and non-tariff barriers, such as sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) measures among its members. The Additional Protocol also contains clauses on government procurement, trade facilitation, investment, financial services, maritime services, e-trade, telecommunication, dispute resolution and transparency. Important actions have already been taken in other areas like those regarding the merger of stock exchanges and the facilitation of movement of businessmen and people in general.

The majority of the founding members have already deposited the instruments ratifying the Framework Agreement. Mexico was the first country to complete the process in January 2013. Chile and Peru followed in July 2013. Colombia has yet to ratify its membership to the Pacific Alliance. The agreement was approved in 2013, to be later declared unconstitutional in April 2014 due to procedural breaches. After Presidential election in August 2014, the Colombian Congress passed the agreement again and is expecting a final approval from the constitutional court before the ratification is completed. The Colombian president is very confident on the final approval.

The open regionalism concept on which the Alliance is based as well as the political will that the leaders are wielding in its construction has elicited worldwide interest as witnessed by the 32 countries that now have observer status within the Alliance. Costa Rica and Panama are now official candidates for membership. It is also significant that as a bloc the Pacific Alliance can act with a single voice within the TPP and other trading bloc negotiations.

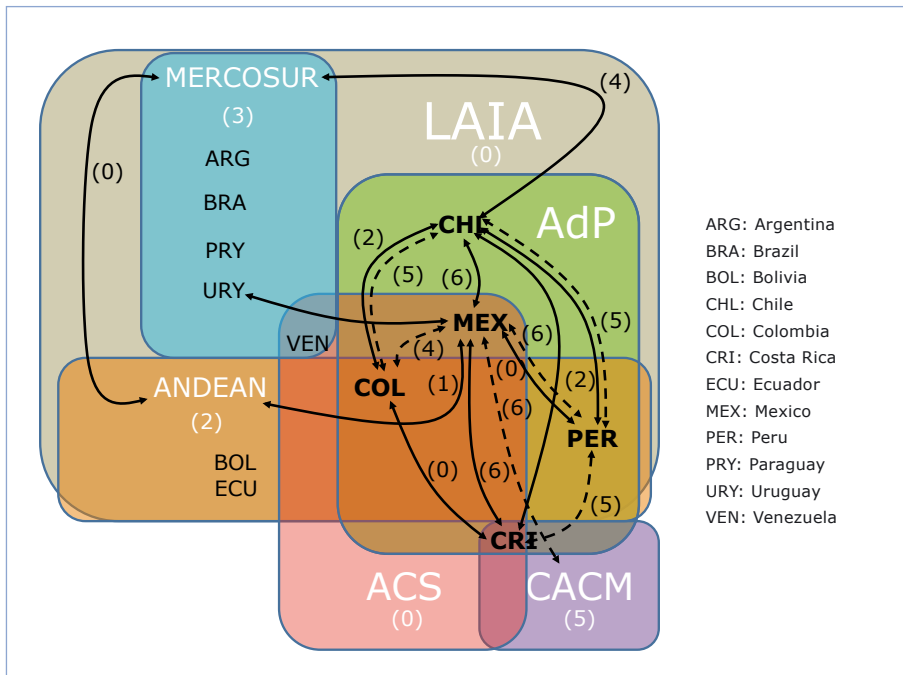
Crucially however, the Alliance opens the possibility for its members to better confront the challenges faced in the areas of science, technology and the development of human capital where collaboration can be vital if the region is to be competitive in global value chains with more diversified and technologically advanced products and services. Most importantly, the Alliance can help to lock-in better public policies based on prudent macro-economic approaches in the framework of shared principles concerning human rights, the environment and democracy.

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2.3 STATE OF REGIONAL TRADE INTEGRATION

Figure 01 graphically summarizes regional trade integration efforts. It depicts which Latin American countries belong to the big trade blocs LAIA, MERCOSUR, Pacific Alliance, ANDEAN, Association of Caribbean States (ACS) and Central American Common Market (CACM). The memberships overlap, i.e. many Latin American countries belong to more than one of these regional FTAs. For example, Colombia is part of ANDEAN and the ACS, as well as a founding member of AdP. Furthermore, Figure 01 shows bilateral trade liberalization efforts with arrows. Dashed arrows indicate FTAs that have been negotiated and entered into force after 2007, the base year of our simulation exercise. The figure clearly demonstrates that Latin America is a "spaghetti bowl" of FTAs, as Jagdish Bhagwati (1995) famously coined the phenomenon of regionalism in world trade.

Figure 01 The AdP in the Latin American spaghetti bowl



Source: Data from WTO RTA Gateway and Dür et al. (2014), own visualization.

These bilateral and multilateral FTAs differ in the level of trade liberalization they seek to achieve. While some shallow agreements only specify the reduction or elimination of tariff barriers, other deeper FTAs also deal with the reduction or elimination of non-tariff trade barriers such as, e.g., customs and administrative entry procedures, product standards, labeling, packaging or sanitary and phytosanitary requirements. In an effort to categorize the liberalization efforts, Dür et al. (2014) have constructed an index of the depth of all WTO-registered trade agreements. This index counts the number of provisions (partial scope agreement, substantive provisions on services, investments, standards, public procurement, competition and intellectual property rights) an FTA covers. The index ranges from 0 to 7, where 0 indicates a partial scope agreement and 7 is the deepest level of integration. Figure 01 gives the depth of the various Latin American FTAs in parantheses (either below the FTA acronym or beside the arrow representing a bilateral FTA). For example, the Peru-Mexico FTA, that entered into force in 2012, has a depth index of 6. So it is deemed a deep FTA that covers virtually all of the above mentioned provisions. Accordingly, the CACM is a deep FTA, the depth of MERCOSUR and ANDEAN are in the middle range, while LAIA and ACS are shallow FTAs.

Furthermore, the Pacific Alliance countries have negotiated FTAs with many trade partners outside of Latin America. Table 01 provides an overview, together with the depth of the respective FTA as given by Dür et al. (2014).¹ FTAs that are currently under negotiation or have not yet entered into force are indicated in yellow. Chile, Mexico and Peru are also in negotiations for a Trans-Pacific Partnership with other countries in the Asia-Pacific region, indicated by an asterisk in Table 01.

¹ For FTAs signed after 2009, the depth index is not available since the DESTA data-base by Dür et al. (2014) only extends to the year 2009.

Table 01 FTAs of AdP countries with AdP observers and other countries

	Chile*		Colombia		Costa Rica		Mexico*		Peru*	
	Year of entry into force	Depth	Year of entry into force	Depth	Year of entry into force	Depth	Year of entry into force	Depth	Year of entry into force	Depth
Canada*	1996	(5)	2008	(6)	2002	(4)	1994	(7)	2008	(6)
United States*	2004	(6)	2012	(7)	2009	(6)	1994	(7)	2009	(7)
China	2006	(3)			2011				2010	(5)
India	2007	(1)								
Japan*	2007	(7)					2005	(6)	2012	
Singapore*	2006	(6)			2013				2009	(6)
South Korea	2004	(7)	2013						2011	
Australia*	2009	(7)								
New Zealand*	2006	(6)								
European Union	2003	(6)	2013		2013		2000	(3)	2013	
Switzerland	2004	(6)	2011	(7)			2001	(7)	2011	
Turkey	2011	(2)								
Israel			2013				2000	(4)		
Morocco										
Iceland	2004	(6)	2011	(7)			2001	(7)	2011	
Norway	2004	(6)	2011	(7)			2001	(7)	2011	
Brunei*	2006	(6)								
Indonesia										
Malaysia*	2012									
Thailand									2011	(1)
Vietnam*	2012									

Source: Data from WTO RTA Gateway and Dür et al. (2014), own visualization. * indicates parties to the negotiations of the Trans-Pacific Partnership TPP.

The typical FTA an AdP country has signed with other countries in North America, with the EU or Asian and Oceanian countries is, with an index of depth of 6 or 7, very deep. So trade integration with the US, the EU and Asia is already more advanced than regional integration in Latin America.

Also most AdP countries are part of the Global System of Trade Preferences among Developing Countries (GSTP)² and the Protocol on Trade Negotiations (PTN).³ These are partial scope agreements which aim to increase trade between developing countries. However, both treaties are shallow FTAs mostly dealing with tariff reductions.

2 The GSTP comprises the countries Algeria, Argentina, Bangladesh, Benin, Bolivia, Brazil, Cameroon, Chile, Colombia, Cuba, Ecuador, Egypt, Ghana, Guinea, Guyana, India, Indonesia, Iran, Iraq, Democratic People's Republic of Korea, Republic of Korea, Libya, Malaysia, Mexico, Morocco, Mozambique, Myanmar, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Singapore, Sri Lanka, Sudan, Tanzania, Thailand, The former Yugoslav Republic of Macedonia, Trinidad and Tobago, Tunisia, Venezuela, Vietnam and Zimbabwe.

3 PTN covers the countries Bangladesh, Brazil, Chile, Egypt, Israel, Republic of Korea, Mexico, Pakistan, Paraguay, Peru, Philippines, Serbia, Tunisia, Turkey and Uruguay.

"The Pacific Alliance members have engaged in a variety of trade liberalization efforts within Latin America. However, much of the trade integration efforts has also aimed at the big markets in the US, Europe and also Asia."

Summarizing, the Pacific Alliance members have engaged in a variety of trade liberalization efforts within Latin America. However, much of the trade integration efforts has also aimed at the big markets in the US, Europe and also Asia.

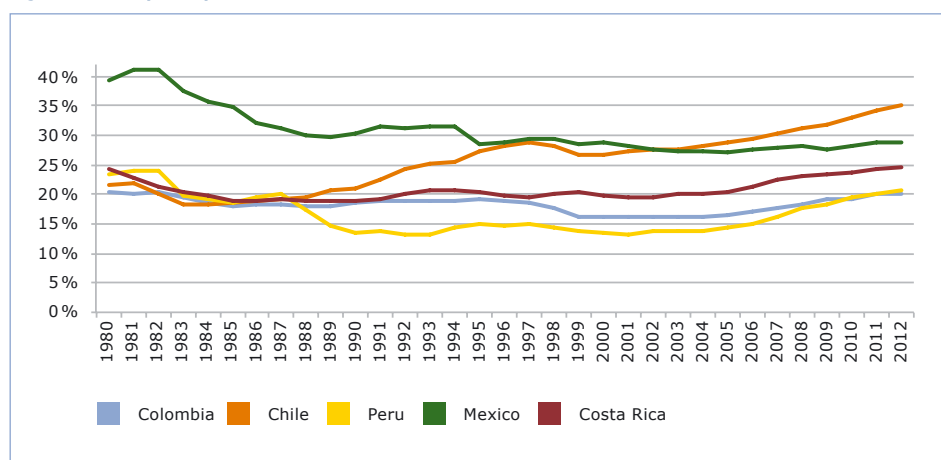
2.4 MACROECONOMIC STATISTICS OF ADP MEMBERS

The last thirty years of economic development amongst the members of the AdP can be divided into two phases: an early phase of relative fall back or divergence with respect to the world's reference country, the US, and a later phase of catching-up or convergence. Figure 02 illustrates the GDP per capita in international purchasing power parity (PPP) units of the 5 AdP countries relative to the USA.

The three Andean countries – Colombia, Chile, Peru – started off with very similar relative levels of development. In 1980, GDP per head in PPP units was 22% of the US level in Chile, 24% in Peru, and 21% in Colombia. Costa Rica had a very similar relative position.

Mexico, in contrast, enjoyed real per capita income amounting to about 40% of the US level. Subsequently, however, Mexico's relative position deteriorated quickly to about 30% in 1988 – a drop of more than 10 percentage points in less than 8 years. From then on, GDP per capita in PPP terms remained close to 30% of the US level. This relative stagnation was not visibly changed by the country's entry into NAFTA in 1994 or by the entry into force of a major trade treaty with the EU in 2000. The positive impulses of these agreements were swamped by the negative effects of internal and external shocks.

Figure 02 GDP per capita in international PPP units relative to USA



Source: WDI 2013 (series NY.GDP.PCAP.PP.KD), own calculations.

The other AdP countries also experienced a period of relative decline, but they exited this phase at different points in time. It took longest for Peru, whose relative stance with the US slid from 23% to 13% in 1992, remained at levels around 14% until 2005, but increased to 21% until 2012 in an impressive catching up process. The other extreme is Chile, which had a very similar level of development than the other Andean countries in 1988. In the following quarter century it converged to about 35% of the US level, overtaking Mexico in 2003 and the positive trend seems unbroken. In Colombia and Costa Rica, the period of relative decline also ended in 1988, but rather than converging the countries entered a period of relative stagnation. Their catching-up process kicked in at about the same time as Peru's but progress has been less drastic. Interestingly, the turn-around broadly coincided with the opening of the economies to foreign competition, foreign direct investment, and to the conclusion of free trade agreements with the US or the EU.

Nonetheless, the recent history of economic development of AdP countries is, broadly speaking, sobering: only Chile was able to narrow the income gap with the USA, Mexico lost ground substantially, and the other countries just managed to approximately keep their relative positions.

"Nonetheless, the recent history of economic development of AdP countries is, broadly speaking, sobering: only Chile was able to narrow the income gap with the USA."

Table 02 Annualized growth rates of GDP per capita (constant LCU)

	1960– 1970	1970– 1980	1980– 1990	1990– 2000	2000– 2010	2010– 2013
COL	2.14%	3.10%	1.48%	0.73%	2.51%	3.59%
CHL	2.26%	0.96%	2.07%	5.00%	2.62%	4.16%
PER	2.33%	0.84%	-3.03%	2.15%	4.43%	4.76%
MEX	3.47%	3.70%	-0.23%	1.65%	0.50%	1.77%
CRI	2.80%	2.99%	-0.23%	2.69%	2.57%	2.91%

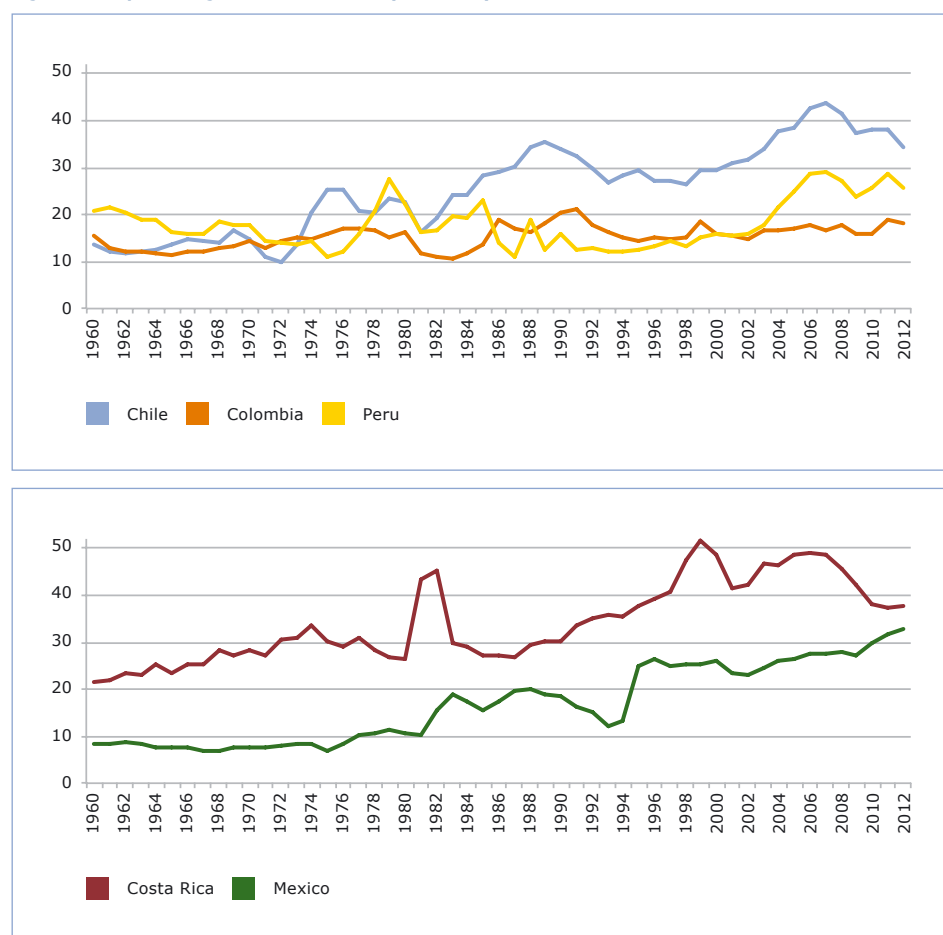
Source: WDI 2014 (series NY.GDP.PCAP.KN), own calculations.

Table 02 presents average annualized growth rates of per capita GDP in constant local currency units over ten year periods. The evidence on growth rates confirms the picture emerging from Figure 02 and extends to a longer time horizon. It illustrates the changing fortunes of Latin American countries. While Mexico was the growth champion in the earlier two decades, this role was played by Chile in the subsequent two periods and by Peru in the most recent ones.

Figure 03 plots the share of exports of goods and services as a percentage ratio of GDP for the AdP countries over time. In 1960, the countries had ratios lying in a relatively narrow band defined by 8.5% (Mexico) at the lower level and 21.4% (Costa Rica) at the higher level. In all countries, the openness measure went up considerably, and lies now between 18.3% (Colombia) and 37.7% (Costa Rica). While differences in levels are strongly affected by the size of countries' internal markets the dynamics and timing of their evolution differ substantially across countries.

In Mexico, the exports-GDP ratio jumped upon entry into force of NAFTA, but it is less clear whether the increase in the gross value of international transactions is matched by a similarly sized increase in the GDP share of domestic value added embodied in foreign final demand. In Chile, the opening up started earlier, most visibly in the beginning of the 1980s. The degree of openness increased in two major shifts. However, it appears strongly driven by the evolution of commodity prices (especially copper) and inherits some of those prices' inherent volatility. Amongst the other countries, Peru stands out, as it increased its exports over GDP ratio from 13.1% in 1998 to 29.1% in 2007 and also weathered the world export collapse of 2008/09 rather well.

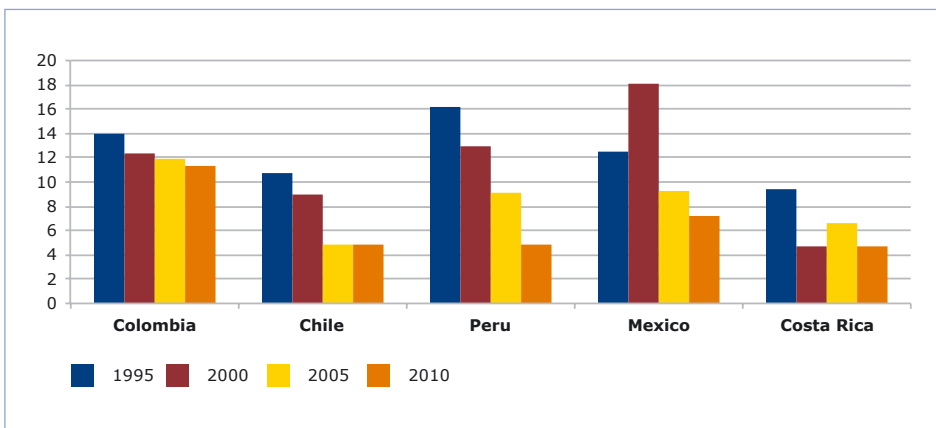
Figure 03 Exports of goods and services (% of GDP)



Source: WDI 2013 (series NE.EXP.GNFS.ZS).

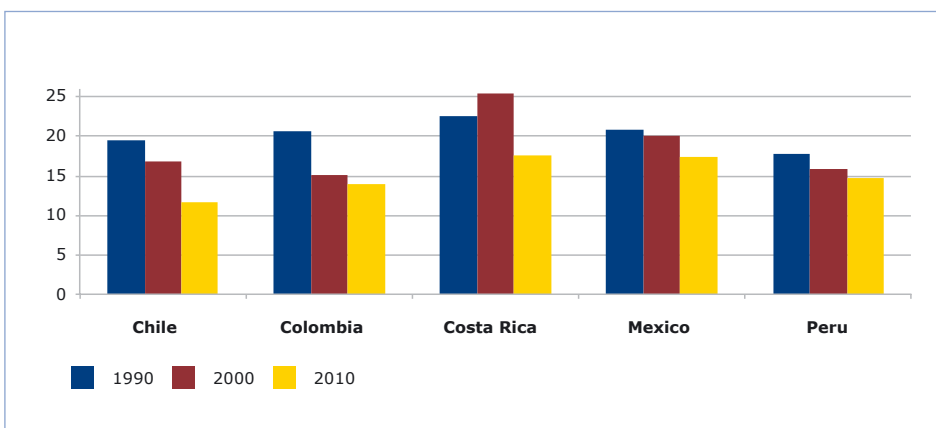
Figure 04 shows the evolution of average applied tariff rates for manufacturing products for the AdP countries. In all countries, tariffs went down substantially, with the strongest drop in Peru. In that country, the average import tariff stood above 16% in 1995; in the most recent data it is less than 5%. Chile and Costa Rica have achieved similarly low average tariffs, but they started from much lower levels (11% in Chile and 9% in Costa Rica); Colombia and Mexico have substantially higher levels of protection in place than Peru or Chile.

Figure 04 Tariff rate, applied, simple mean, manufactured products (%)



Source: WDI 2013 (series TM.TAX.MANF.SM.AR.ZS).

Figure 05 Manufacturing, value added (% of GDP)



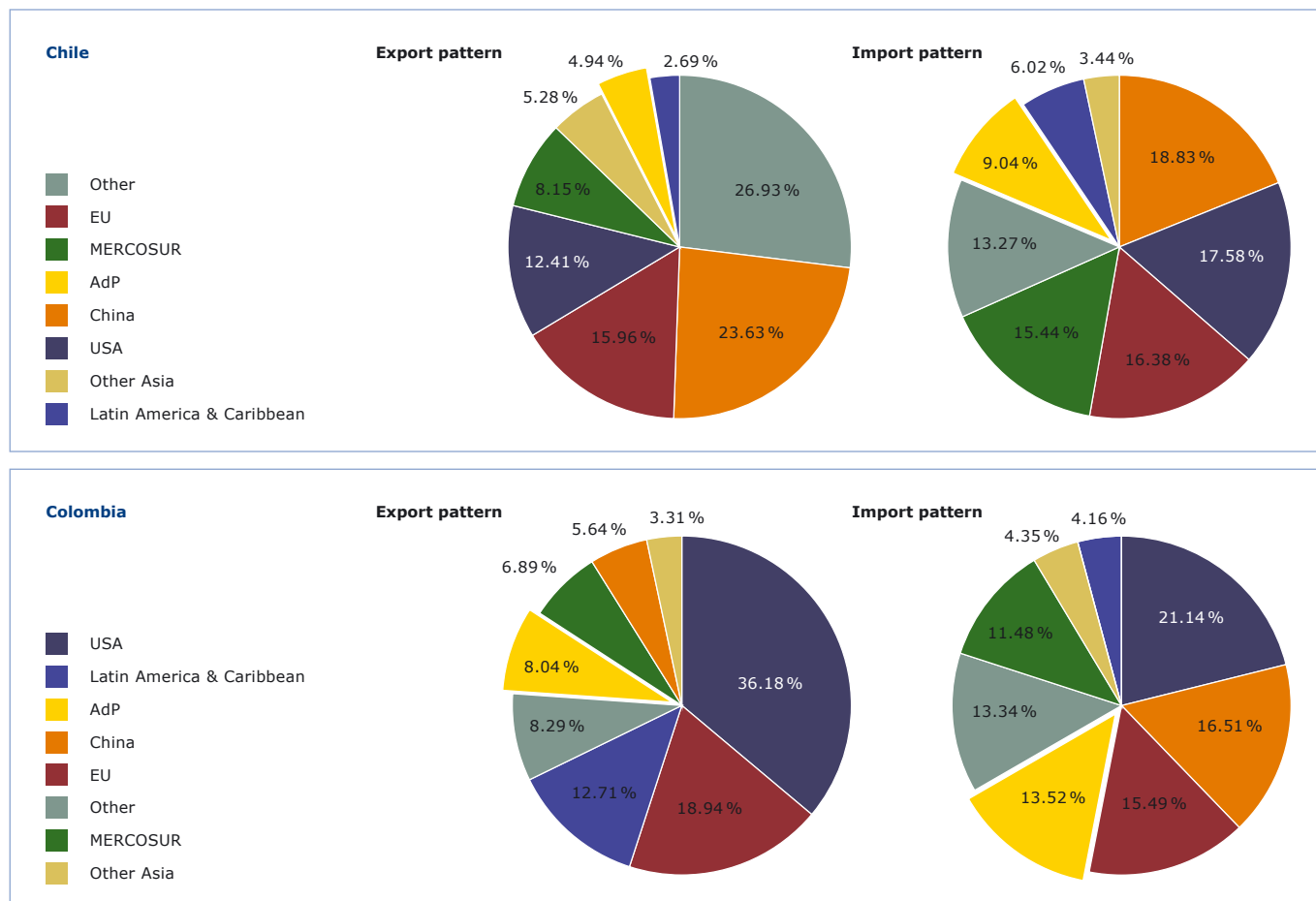
Source: WDI 2013 (series NV.IND.MANF.ZS).

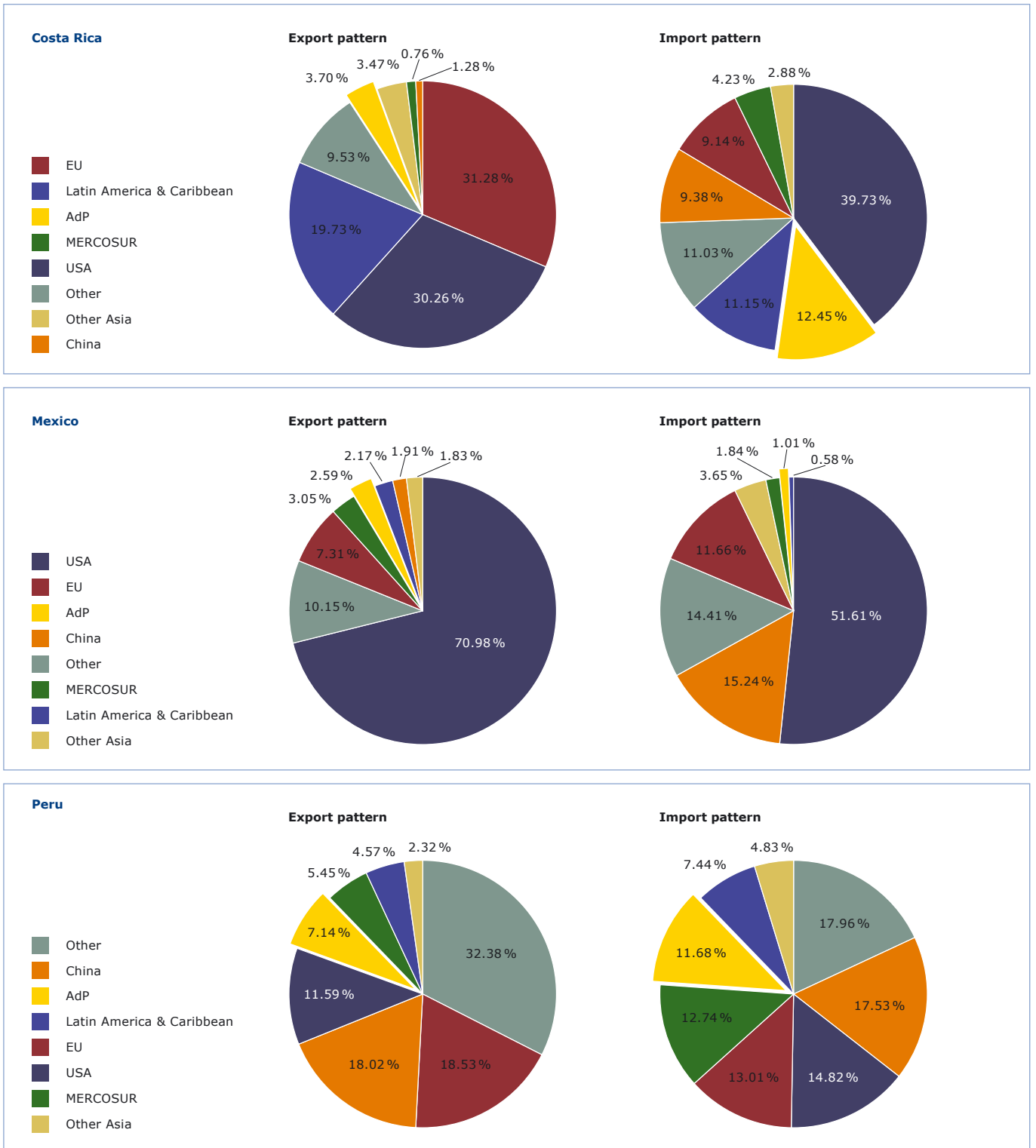
While the recent history of trade liberalization appears successful in most of the AdP countries, the development gap with the advanced industrialized countries is still wide. This has been illustrated in Figure 02. Moreover, as evidenced in the following chart (Figure 05), all countries in the AdP experienced strong reductions in the share of value added generated by the manufacturing sector. In countries such as Colombia or Peru, the decline from 2000 to 2010 was much smaller than the one between 1990 and 2000, but a reversal of trends still needs to occur. A major hope that one may attach to the introduction of the AdP is that it fosters the emergence of a regional production network through which countries move up the value chain and keep a larger fraction of high value added activities within their countries.

2.5 TRADE PATTERNS OF ADP MEMBERS

Even though the openness of AdP countries increased, trade among AdP members is still relatively small. This becomes clear when looking at a graph of the structure of exports and imports of AdP countries with various regions, see Figure 06. The trade data for the year 2012 stems from the BACI dataset and covers agricultural, mining, and manufacturing trade.

Figure 06 Regional decomposition of AdP countries' trade, 2012





Source: BACI trade data, 2012.

Table 03 Sectoral decomposition of Chilean exports, 2012

Sector	Exports (mn USD)	Share AdP (%)
Metals & Metal products	29,501.8	1.9
Mining	19,270.6	0.4
Agriculture & Food	15,003.6	8.3
Paper & Wood	5,191.2	12.2
Chemicals	4,831.9	14.7
Machinery	2,017.5	18.5
Textiles & Leather	496.3	29.0
Manufactures nec	226.3	25.7

Source: BACI trade data, 2012.

Chile's most important trade partners are China, the US and also the EU. Combined, these countries take up about 50% of Chile's exports and imports. Only around 5% of exports and 10% of Chilean imports are with other AdP countries. MERCOSUR, with which Chile has an FTA, is more important in Chilean trade than the AdP members. Metals & Metal products are Chile's most important export sectors, but only about 2% of these exports go to the AdP members, see Table 03. Mining and Agriculture & Food take the position two and three in terms of export volume; where again the export shares to AdP members are relatively small.

Table 04 Sectoral decomposition of Colombian exports, 2012

Sector	Exports (mn USD)	Share AdP (%)
Mining	36,602.0	5.6
Agriculture & Food	6,758.6	7.1
Metals & Metal products	5,454.9	1.7
Chemicals	3,910.2	24.7
Machinery	1,694.6	27.0
Manufactures nec	1,502.9	11.6
Textiles & Leather	1,229.0	21.6
Paper & Wood	662.5	24.9

Source: BACI trade data, 2012.

With almost 40% of exports, the USA is the single most important destination for Colombian exports. The USA is the most important trade partner in terms of imports as well. Latin America plays an important role, too. Roughly a quarter of Colombian exports and 30% of its imports are with Latin America. On the export side, about 12% of exports go to Other Latin American Countries and the Caribbean, 8% go to AdP countries and a further 7% go to MERCOSUR countries; while on the import side AdP (14%) and MERCOSUR (12%) countries are important import sources. For Colombia, Mining, Agriculture & Food, and Metals & Metal Products are the most important export sectors (Table 04). But the share of exports in these sectors that is destined for other AdP countries is minor. In other sectors, however, other AdP members are important export destinations with export shares of 20 to 30%; in particular in Machinery, Paper & Wood and also Chemicals.

Table 05 Sectoral decomposition of Costa Rican exports, 2012

Sector	Exports (mn USD)	Share AdP (%)
Machinery	5,461.3	2.3
Agriculture & Food	5,008.7	4.1
Chemicals	1,245.9	8.0
Metals & Metal products	544.4	4.4
Paper & Wood	331.2	2.6
Manufactures nec	315.9	4.1
Textiles & Leather	300.3	2.8
Mining	6.0	28.0

Source: BACI trade data, 2012.

For Costa Rica, the import and export pattern strongly diverges. While the EU is the largest export partner (with a share of 32%), only 9% of its imports are from the EU. On the other hand, only 4% of Costa Rican exports go to other AdP members, while 12% of its imports stem from the AdP. Table 05 shows that Machinery and Agriculture & Food are the dominant export sectors for Costa Rica.

Table 06 Sectoral decomposition of Mexican exports, 2012

Sector	Exports (mn USD)	Share AdP (%)
Machinery	175,389.1	2.5
Mining	51,209.5	0.4
Metals & Metal products	26,268.4	2.7
Agriculture & Food	22,753.6	1.8
Chemicals	20,834.3	9.3
Manufactures nec	12,239.9	2.5
Textiles & Leather	7,523.0	2.7
Paper & Wood	3,256.4	4.9

Source: BACI trade data, 2012.

For Mexico, AdP is a minor trade partner. Mexico's trade is predominantly with the USA. And China plays an important role as a source of imports (with an import share of 15%). The Mexican economy appears more diversified than the economies of the other AdP countries. In 2012, the most important export sectors are Machinery, followed by Mining and Metals & Metal products.

In 2012, other countries (particularly in the OECD) are the most important trade partners of Peru, followed by the EU, China and the USA. With 12 and 7%, respectively imports and exports with AdP countries play a secondary role. In Peru, the Mining and Metals & Metal products sectors dominate exports. For these sectors, however, other AdP partners are minor trade partners.

Table 07 Sectoral decomposition of Peruvian exports, 2012

Sector	Exports (mn USD)	Share AdP (%)
Mining	16,025.6	7.1
Metals & Metal products	14,414.9	2.6
Agriculture & Food	8,151.3	6.6
Textiles & Leather	2,065.5	9.5
Chemicals	1,609.9	33.1
Machinery	522.7	26.2
Manufactures nec	519.4	22.2
Paper & Wood	372.3	25.7

Source: BACI trade data, 2012.

Also interestingly, China is an important trade partner for Chile and Peru, and to a lesser extent also for Mexico. These three AdP countries take part in the negotiations of a TPP; and have a major part of their trade with other TPP countries like China, the USA and other Asian countries.

In summary, Latin America and the AdP countries in particular are non-negligible trade partners for all AdP countries except Mexico. But given the AdP countries' proximity to each other, trade flows are comparatively small and trade potentials not yet fully exploited. A possible explanation is that, in the 21st century, AdP countries have entered into deep trade integration with the big markets in the US, the EU and Asia; thus diverting trade away from Latin American trade partners (see also Table 01). Another reason is that, despite tariff liberalizations between AdP countries, there still exist many non-tariff barriers to trade. The Pacific Alliance sets out to eliminate such barriers to trade between AdP members. In the following, we assess the trade creation and trade diversion effects of the Pacific Alliance for its member states.

III METHODOLOGY



The formation of a deep Pacific Alliance free trade agreement is associated with hopes of increased trade integration and economic growth and development in the region. A central issue for the economic analysis of the Pacific Alliance consists in separating the effects of a deepening of regional integration from already existing agreements. The ifo Institute has an analytical tool, that can take the depth of integration of negotiated agreements into account when simulating future trade policy scenarios. In the following section, we will briefly outline the trade model the simulations are based on and how we obtain the relevant model parameters.

3.1 SHORT DESCRIPTION OF THE ANALYTICAL TOOL

Our approach is in the line of the new quantitative trade theory, as e. g. surveyed by Costinot and Rodriguez-Clare (forthcoming). This literature uses a structurally estimated, general equilibrium trade model to predict trade and welfare effects of trade policy changes. To be more specific, our study builds on an extension of the seminal Eaton and Kortum (2002) gravity model put forward by Caliendo and Parro (forthcoming). It is a multi-sector trade model with input-output linkages. This implies that trade cost changes have effects through the (global, regional and national) supply chain.

The key equation of the model – the gravity equation – describes the level of bilateral trade flows depending on country characteristics (such as country size, technology, price levels) and bilateral trade costs. How much trade flows react to changes in trade costs is governed by a key model parameter – the sectoral productivity dispersion. This parameter describes the shape of the productivity distribution in a sector. In a sector, where the dispersion of productivities (and thus prices) across varieties is small, trade flows will react more strongly to trade cost changes; and vice versa. The inverse of the

"A new aspect of our approach is that we distinguish two types of FTAs: FTAs that only provide a shallow level of trade integration and FTAs that provide a deep level of integration."

sectoral productivity distribution is akin to a sectoral elasticity of distribution in Armington type trade models. The higher the elasticity of substitution, e. g. when the sectoral varieties are more homogeneous, the stronger the change in trade flows because it is easier to switch between varieties.

Bilateral trade costs cannot be observed directly, except for bilateral tariff levels. So trade costs are assumed to be a function of a country pair's tariffs and observable trade cost proxies such as bilateral distance, and dummies for sharing a common border, a common language, shared colonial history and a dummy for the existence of a (bilateral) free trade agreement. Since tariffs are an explicit part of trade costs, the FTA dummy captures the effect of an FTA that goes beyond the reduction or elimination of tariffs. Thus, the FTA dummy captures the trade-enhancing effect of reducing non-tariff trade barriers like standards, labeling requirements, sanitary and phytosanitary trade barriers, technical barriers to trade, etc.

Typically, the gravity literature works with a single FTA dummy. This implies that once a country pair is in an FTA, we cannot simulate further trade creation from a deepening of regional integration. However, this is a vital aspect in the formation of the Pacific Alliance. Many AdP countries have FTAs with other AdP members, even though some of them are only shallow, as summarized in Figure 01.

A new aspect of our approach is that we distinguish two types of FTAs: FTAs that only provide a shallow level of trade integration and FTAs that provide a deep level of integration. I. e. we work with a dummy for shallow and a dummy for deep FTAs, respectively. We classify the existing FTAs in Latin America and the rest of the world with the DESTA dataset on the depth of trade integration provided by Dür et al. (2014). As mentioned before, their index of depth of an FTA counts the numbers of provisions (partial scope agreement, substantive provisions on services, investments, standards, public procurement, competition and intellectual property rights) an FTA covers. The index ranges from 0 to 7, where 0 indicates a partial scope agreement and 7 is the deepest level of integration. We recode this index of depth into two dummies: a shallow and a deep FTA dummy. The shallow FTA dummy switches to one when the depth index is between 0–7, and the deep dummy for values between 4 and 7, respectively.

We can empirically estimate the gravity equation with a cross-section of trade volumes. As suggested by the theoretical gravity equation, sectoral, bilateral trade volumes are regressed on bilateral tariffs and other trade cost proxies. Tariffs are direct trade cost shifters. I. e. the coefficient on differences in tariffs across country pairs directly identifies a key model parameter: the sectoral productivity dispersion. The shallow FTA dummy captures the (trade cost reducing, and thus trade enhancing) effect of having an FTA, while the deep FTA dummy captures the additional effect of deepening the agreement further. Later on in the simulations, these estimated coefficients on the FTA dummies will describe the reaction of trade costs to the formation and deepening of future FTAs. So, the implicit assumption in the simulation is that the Pacific Alliance and other potential FTAs in Latin America will lower trade costs by as much as existing FTAs have.

Bilateral trade volumes are also influenced by country characteristics. These are controlled for with importer and exporter fixed effects. However, the estimates of the FTA dummies could still suffer from an endogeneity bias when, e.g., countries that trade more with each other are also more likely to sign an FTA. In this case, the FTA dummy would overestimate the trade enhancing effect of an FTA. To reduce the endogeneity bias, we use an instrumental variables approach. The instruments should influence the probability to sign an FTA, but other than through the FTA should not affect current trade levels. We employ a contagion index as in Martin et al. (2012) or Baldwin and Jaimovich (2012).⁴ Additionally, we use historical and recent war frequency and lagged average variables for political similarity (average of 2000–2005) as instruments.

Appendix

Table 13 (for manufacturing sectors) and Table 14 (for services sectors) show, for each sector separately, the results of the gravity estimation in a cross section of 2007. Trade data is obtained from UN Comtrade, bilateral tariffs from the WITS database, and other trade cost proxies stem from the CEPII distance dataset. Tariffs are effectively applied tariffs and are aggregated to the sectoral level of GTAP using import weights. Service trade flows stem from GTAP 8.1. Overall, the gravity equation is a very reliable workhorse, as indicated by the high R-squares in all estimations.⁵ Depending on the sector, between 70 and 80% of the variation in bilateral trade flows can be explained with our estimations. The estimates on other trade cost proxies are in line with expectations. Since they do not change over time and play no role for the simulations, we do not discuss them in detail here.

The coefficient on tariffs gives the elasticity of trade flows with respect to tariffs.⁶ Its direct model equivalent is the inverse sectoral productivity dispersion.

In Table 13, the coefficient is negative in all sectors, as expected. The higher bilateral tariffs are, the smaller are bilateral trade volumes. The coefficients vary across sectors: Sectors, which provide rather homogeneous goods such as petroleum, chemicals or ferrous metals, tend to have higher coefficients in absolute terms. In these sectors, we measure stronger reactions to differences in bilateral tariffs. So overall the estimations are in line with expectations.

4 *This instrument weighs the FTAs country A's trade partner has signed with all other countries with country A's export shares with these countries. Thus, it summarizes the threat of trade diversion suffered by country A in the trade partner's market.*

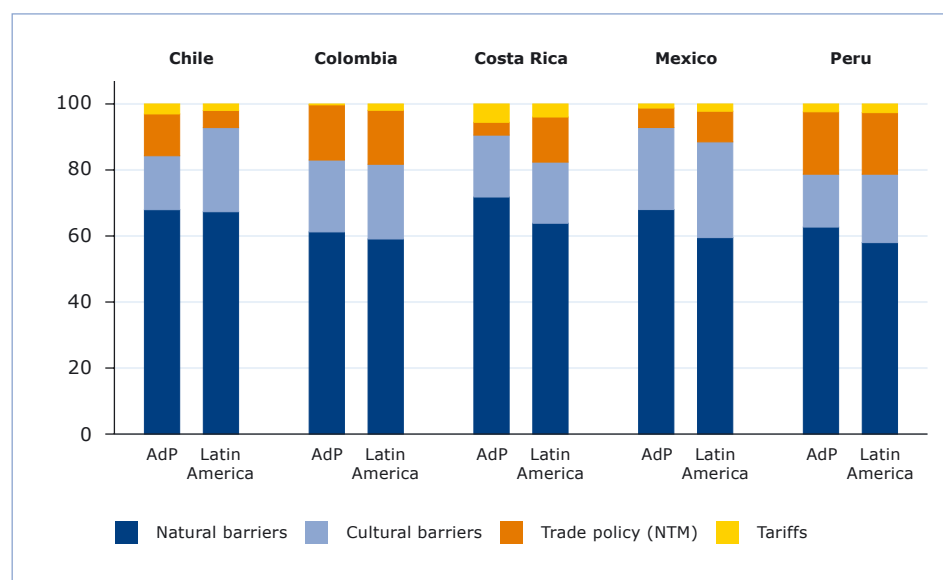
5 *The R-squared is rather low for the Mining and the Petroleum sector. Depending on the specification, the coefficients on the FTA dummies vary strongly and often lose statistical significance. Thus, we set the FTA coefficients to zero for our simulations.*

6 *Bilateral tariffs are not included in Table 14, because there are no tariffs on service trade flows. Instead, we assume an inverse productivity dispersion of 1/5.9591 taken from Egger et al. (2012) for service sectors.*

Table 13 and Table 14 further show that having an FTA typically increases bilateral trade flows. The effect varies by sector. Increasing the level of trade integration provides further trade enhancing effects, as indicated by the mostly positive signs on the deep FTA dummy. Particularly in services industries, the shallow FTA coefficient is mostly not statistically different from zero. This implies that, on average, only deep FTAs have effects on service trade flows. This seems sensible, given that many shallow FTAs do not have provisions on services trade.

Equipped with the model and model parameters, we can then simulate the effects of trade policy shocks by changing bilateral tariff levels and changing the bilateral FTA status. For the simulations, we need additional information on the production structure and consumption patterns in all countries of the world. The data is taken from the GTAP project because it provides a comprehensive dataset for all countries in the world and also includes service trade flows. The base year of GTAP 8.1 is 2007. The dataset provides trade flows, GDPs, expenditure levels and input-output information for 134 regions and 57 sectors. To reduce computation time, the different agricultural sectors are subsumed in one sector. We end up with 32 sectors, about 50% of which are service sectors.

Figure 07 Decomposition of trade costs of the five AdP countries with AdP group and Latin America, respectively, 2007



Source: Authors' calculations.

Figure 07 decomposes the estimated trade costs of the five AdP countries Chile, Colombia, Costa Rica, Mexico and Peru with AdP trade partners as well as with all Latin American countries. Trade policy (NTM) comprises non-tariff trade policy measures at the border. The effect is estimated with a dummy for shallow and deep FTAs. It captures the extent of trade cost reductions that have been possible in existing FTAs and which should also be possible in the AdP countries. Colonial history and whether a country pair has been part of one country is surmised in other political barriers. The last part – natural barriers – constitutes geographic distance, borders and also language barriers.

Figure 07 shows that, while tariffs and non-tariff measures have been reduced in the past, they have not yet been eliminated completely and still play an important role for trade costs in Latin America. Bilateral trade costs could be reduced by between 10 and 20%, on average, by eliminating trade policy related costs. Thus, Figure 07 suggests positive welfare gains from trade liberalization between AdP members and within Latin America. The profiles of possible trade cost reductions vary for the five AdP countries. For Colombia and Peru especially, NTMs still matter with respect to other AdP countries, and tariffs seem to be a relatively more important trade barrier for Chile and Costa Rica with other AdP countries.

3.2 DEFINITION OF SCENARIOS

Based on the gravity trade model and parameter estimations, we can quantify the trade creation and trade diversion effects of free trade agreements of different depths. The main focus lies on the economic effects of the Pacific Alliance, but we briefly also describe results for further trade liberalization options in Latin America.

The Pacific Alliance

We start from the benchmark as given in the GTAP 8.1 database. In order to quantify the effects of the AdP, we have to make assumptions on the level of depth of trade integration that the Pacific Alliance will achieve. We develop three types of scenarios which differ with respect to their ambition and, as a consequence, with respect to their timeline.

1. Shallow integration:

Tariffs between AdP countries are completely eliminated.

Tariffs are eliminated and there is a reduction of NTMs. The magnitude of this reduction of NTMs is based on the estimated effects of existing shallow FTAs. That is, in this scenario the shallow FTA dummy is switched on for AdP country pairs.

"We develop three types of scenarios which differ with respect to their ambition and, as a consequence, with respect to their timeline."

2. Medium depth of integration: Tariffs and NTMs between AdP countries are eliminated in all sectors; except for the sensitive sectors agriculture, food and all services industries. That is, in this scenario the shallow and the deep FTA dummy is switched on for AdP country pairs.

3. Deep integration: Tariffs and NTMs between AdP countries are eliminated in all sectors.

Since tariffs are low or even zero between most AdP pairs and most AdP pairs also have some sort of shallow trade integration, we do not expect big trade and welfare effects for the scenarios 1a) and 1b). Scenarios 2 and 3 offer insights into the potentials of growth from a deeper regional integration in the Pacific Alliance. Scenario 3 is our preferred scenario because it best captures the high level of ambition expressed by the leaders of governments of AdP countries at various summits.

One complication that arises from the use of GTAP is that the data stems from the year 2007.⁷ Since then, AdP countries have negotiated several bilateral FTAs among each other and these treaties have already entered into force (see Figure 01). However, the economic effects of this new wave of bilateral treaties are not yet in the baseline data from the year 2007. It implies that scenarios starting from a benchmark in 2007 might exaggerate the economic effects of AdP by overlooking already realized trade potentials. However, provided that some bilateral FTAs are de facto not as deep as they appear de jure, AdP might constitute a commitment device. Then, starting from the baseline 2007 gives the full long-run effect of strengthening and consolidating the AdP. Additionally, it typically takes some time until the economic effects of FTAs are phased in. This would also speak for 2007 as the baseline.

To distinguish the effects of a deeper integration between AdP countries from the effects of the newly negotiated bilateral FTAs, we simulate an alternative baseline in which those treaties have already entered into force. Starting from this alternative baseline, we can increase trade integration in the Pacific Alliance. Thus, we can judge the potential of further liberalizing trade beyond bilateral liberalization efforts. The results will be provided as robustness checks.

⁷ The GTAP dataset is chosen for its rich regional information. The most recent data-base, GTAP 8.1, offers comprehensive input-output-tables and trade flows for 134 regions for the years 2004 and 2007. To our knowledge, it is the only dataset which provides data on all AdP countries as well their trade partners in a unified world input-output framework.

Integration of Pacific Alliance countries with MERCOSUR countries

An alternative route for regional integration in Latin America is to deepen trade integration between the two major country blocs AdP and MERCOSUR. To quantify the effects of this hypothetical AdP-MERCOSUR FTA, we simulate three scenarios: (1) an FTA which only eliminates tariffs between AdP and MERCOSUR countries, (2) an FTA that goes beyond tariff elimination and also reduces non-tariff measures and (3) a deep AdP-MERCOSUR FTA which eliminates all tariff and non-tariff trade policy barriers.⁸

Latin American FTA

In a last set of scenarios, we quantify the economic effects of an FTA between all Central and Latin American countries; again distinguishing different levels of trade liberalization (tariffs-only, shallow NTM reduction, deep FTA).

In contrast to the AdP, neither the AdP-MERCOSUR nor the Latin American FTA are on the table. However, they represent conceivable scenarios for the future. Simulating their economic consequences also highlights the costs of incomplete economic integration in South America. By comparing outcomes of different scenarios, trade policy makers can recalibrate their priorities.

⁸ In these AdP-MERCOSUR scenarios, the trade integration within the AdP and the MERCOSUR bloc is simultaneously increased to the respective level (tariffs only, shallow, or deep).

IV QUANTIFICATION OF THE EFFECTS OF THE PACIFIC ALLIANCE AND FURTHER TRADE LIBERALIZATION EFFORTS IN LATIN AMERICA



4.1 ECONOMIC EFFECTS OF THE PACIFIC ALLIANCE

What are the economic effects of establishing the Pacific Alliance? In this chapter, we first focus on the welfare effects (measured by changes in real income) and distinguish different levels of the depth of trade integration following from AdP. Given that the AdP is an ambitious FTA with provisions going beyond those of more modest initiatives, our preferred scenario is that of a deep AdP. Then we discuss in more detail the effects of the Pacific Alliance on trade patterns and sectoral value added of the member countries.

Figure 08 provides an overview of the real income changes in Latin American countries that would follow from a deep Pacific Alliance. The map is color-coded: □ Light blue indicates a welfare loss; □ medium blue indicates a small increase in real income between 0 and 0.5%; □ blue a medium increase between 0.5 and 1% and □ dark blue indicates a welfare increase larger than 1% of real income. Additionally, Table 08 summarizes the predicted real income change and the associated changes in trade openness of different AdP scenarios for the AdP countries, the MERCOSUR region, other Latin American and Caribbean countries and further regional conglomerates. Columns (1) and (2) provide the results for the deep AdP scenario.

Figure 08 Real income changes from deep Pacific Alliance



Source: Authors' calculations.

Table 08 Real income changes, various AdP scenarios

Region	Scenario: Pacific Alliance							
	Deep		Tariffs only		Shallow		Middle	
	Change in							
	Real Income (in %)	Openness (in %point)	Real Income (in %)	Openness (in %point)	Real Income (in %)	Openness (in %point)	Real Income (in %)	Openness (in %point)
Peru	1.870	2.742	0.002	0.438	0.708	0.914	1.328	2.037
Colombia	0.830	1.149	0.001	0.019	0.013	0.033	0.669	0.886
Costa Rica	0.811	1.215	0.000	0.164	0.117	0.281	0.689	1.054
Chile	0.470	0.706	0.001	0.013	0.080	0.183	0.221	0.399
Mexico	0.122	0.261	0.009	0.042	0.021	0.067	0.107	0.235
MERCOSUR	-0.003	-0.007	-0.004	-0.001	-0.002	-0.002	-0.004	-0.007
Latin America & Caribbean	-0.008	-0.009	-0.008	-0.005	-0.007	-0.005	-0.009	-0.010
USA	0.003	-0.004	0.000	0.000	0.001	0.000	0.002	-0.004
Africa	0.002	0.002	-0.001	0.000	-0.001	0.000	0.001	0.002
Rest of Europe	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000
EU	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	-0.001
Other	0.000	0.002	-0.004	0.000	-0.003	0.000	0.000	0.001
Other OECD	-0.001	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000
Other Asia	-0.005	-0.003	0.000	0.000	0.001	0.000	-0.004	-0.003
China	-0.006	-0.005	-0.002	0.000	0.000	0.000	-0.006	-0.004

Source: Authors' calculations.

Our model simulations predict that Peru and Colombia will benefit most from a broadening and deepening of AdP. Their real income gains are 1.9% and 0.8%, respectively. The gains from trade for a deep AdP are smallest in Mexico, which is a relatively big country and has the majority of its trade with the US. There is also some trade diversion. The MERCOSUR region and other Latin American countries suffer from the deep AdP, although the magnitude of the real income loss is very small.

The real income gains are mirrored by an increase in openness⁹ in the AdP countries (see Table 08, column 2). With a deep AdP, the trade openness increases by 2.7 percentage points in Peru, for example, and by roughly 1 percentage point in Colombia and Costa Rica.

⁹ Trade openness is measured as 1 minus the respective country's import ratio. This trade openness measure is closely linked to welfare gains (see Arkolakis et al., 2012 for details).

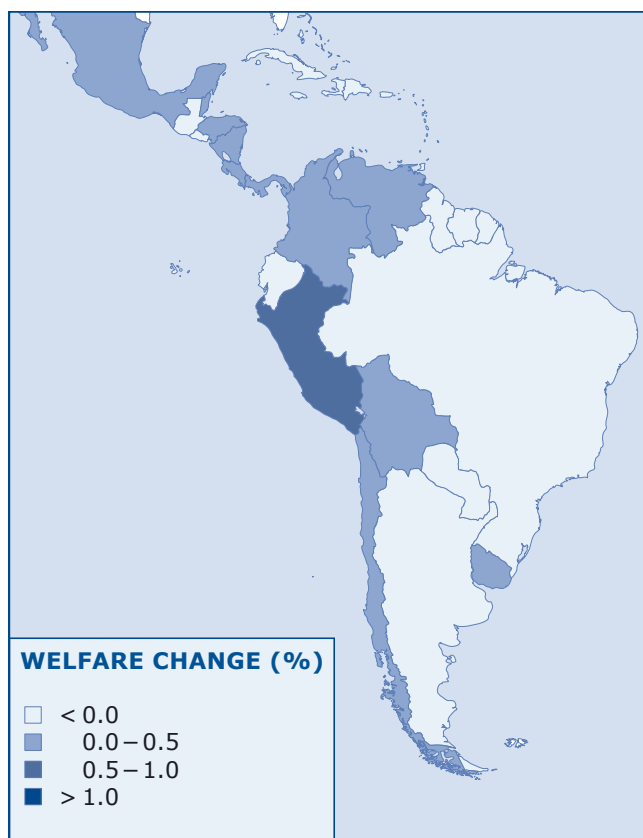
If the AdP would not go beyond reducing tariffs, the expected welfare gains will be negligible and in the range of 0.001 and 0.01 % (compare Table 08, column 3 and Figure 09, panel 1). Peru and to a lesser extent Costa Rica would benefit from shallow trade integration with other AdP countries, while the welfare gains for Chile, Mexico and Colombia would fall short of 0.1 % (see Table 08, column 5 and Figure 09, panel 2). When trade liberalization is further deepened between the AdP countries, but agriculture, food and services sectors are not covered by the trade integration (middle scenario in Table 08, column 7 and Figure 09, panel 3), the gains from trade will not be fully realized. For Peru, e.g., the gains from trade will be 30% lower, an increase of real income of 1.3% instead of 1.9% as in the deep AdP scenario will be realized.

Figure 09 Real income changes from various Pacific Alliance scenarios

a) Tariffs only



(b) Shallow AdP



(c) Middle AdP



Source: Authors' calculations.

As already discussed in the scenario definition, one issue with our simulations is that the baseline year is 2007. Since then, several bilateral FTAs between AdP countries have entered into force (see the dashed lines in Figure 01). These are Chile-Colombia and Peru-Chile in 2009, Mexico-Colombia in 2011, Mexico-Central America in 2012 and Costa Rica-Peru in 2013.¹⁰ To capture this, we can first simulate a world where these additional bilateral FTAs have entered into force. From this alternative benchmark, we can then predict the effects of a switch to an AdP of deep trade integration.

Figure 10 and Table 09 show the results. Column (1) gives the real income changes when going from the baseline in 2007 to the alternative benchmark. Our model predicts substantial gains from the new wave of bilateral liberalization efforts; especially for Peru, Colombia and also Chile with real income gains of 1.6, 0.6 and 0.5%, respectively. The gains are less pronounced but still positive for Costa Rica (+0.2%) and Mexico (+0.1%).

¹⁰ Coding these agreements with the Dür et al. (2014) methodology we find that all these new bilateral FTAs have a depth index of at least 4. So we assume them to be deep FTAs in our simulations.

Figure 10 Real income effects of new liberalization wave and deep AdP from alternative benchmark

(a) New bilateral FTAs



(b) Additional benefits deep AdP



Source: Authors' calculations.

The additional effect that can be expected from going beyond these new bilateral efforts towards a unified, deep AdP is shown in column (2) and the right panel in Figure 10. These real income changes are somewhat smaller in magnitude than the total effect in column (3) and also the ordering of the countries varies. In particular, the simulation predicts additional benefits for Costa Rica (+0.6%) and Peru (+0.3%) and also Colombia (+0.2%). Most notably, for Chile and Mexico there are almost no additional gains from trade. In the Chilean case, this may stem from the fact that the bigger part of the gains from trade has been realized through bilateral efforts already. While for Mexico the strong focus on the USA as a trade partner plus an already strong integration in the alternative benchmark with the other AdP countries may explain this finding.

Table 09 Effects of deep AdP excluding new bilateral FTAs between AdP countries

Region	Real income change (in %)		
	Scenario: Pacific Alliance		
	2 step counterfactual		1 step
	Baseline incl. new bilateral FTAs	Switch to full AdP	
Costa Rica	0.193	0.619	0.811
Peru	1.601	0.265	1.870
Colombia	0.647	0.179	0.830
Chile	0.462	0.006	0.470
Mexico	0.122	0.000	0.122
MERCOSUR	-0.005	0.002	-0.003
Latin America & Caribbean	-0.005	-0.002	-0.008
USA	0.001	0.002	0.003
Africa	0.001	0.001	0.002
Other OECD	-0.001	0.000	-0.001
EU	0.001	0.000	0.000
Other	0.000	-0.001	0.000
Rest of Europe	0.002	-0.001	0.001
China	-0.005	-0.001	-0.006
Other Asia	-0.001	-0.003	-0.005

Source: Authors' calculations.

Summarizing, a strong AdP promises gains from trade for most AdP countries, and especially so for Costa Rica, Peru and Colombia. The additional real income increase is less pronounced when factoring in the new wave of bilateral liberalization efforts that started in 2009. However, when the effects of the Pacific Alliance are to create a commitment device for bilateral FTAs (that are de jure deep but de facto not enforced) and to consolidate the trade liberalization efforts, the full effect of going from the 2007 baseline to the full AdP scenario could be interpreted as the long run effect of a strengthening of the Pacific Alliance.

Other regions also strive to liberalize trade. Chile, Mexico and Peru are in negotiations with other countries in the Asia-Pacific region for a Trans-Pacific Partnership (TPP). The EU has recently negotiated an FTA with Canada (CETA) and negotiations for a Transatlantic Trade and Investment Partnership (TTIP) between the EU and the USA and an EU-Japan Treaty are under way. Last, ASEAN countries currently negotiate the Regional Comprehensive Economic Partnership (RCEP) with trade partners in Asia and the Pacific such as China, Australia, etc.¹¹ We want to investigate the influence of these treaties for real income in Latin America. What effects can be expected from the AdP in such a future world?

¹¹ In the simulation exercise, we assume that all other FTAs as well as AdP are deep FTAs.

Table 10 AdP in a new world trade order

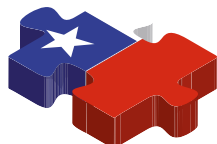
Scenario:	Real income change (in %)	
	Other FTAs (TPP, TTIP, CETA, EUJPN, RCEP)	Additional effect of AdP in world with other FTAs
Peru	5.062	0.261
Chile	1.037	0.131
Mexico	0.646	-0.006
Colombia	0.556	0.728
Costa Rica	-0.755	0.868
Latin America & Caribbean	0.781	-0.073
MERCOSUR	0.245	-0.002
Other Asia	9.348	-0.912
Other OECD	7.807	-0.623
China	7.681	0.126
USA	4.970	-0.107
EU	3.565	-0.009
Other	1.354	-0.155
Africa	0.841	-0.076
Rest of Europe	0.447	-0.011

Source: Authors' calculations.

The results are presented in Table 10. OECD countries and other countries in Asia will profit from a realization of the discussed FTAs. The model predicts a real income increase in the USA of 5%, for other OECD countries of 7.8% and for the EU of 3.6%. Interestingly, most other regions (who may not be directly involved in the trade liberalization efforts) will also benefit from the increased demand in the liberalizing regions and the integration of the global value chain. Peru, Chile and Mexico (all members of TPP) gain in terms of real income; in the case of Peru even substantially by 5.1%. Colombia also benefits while Costa Rica has to suffer a real income reduction of 0.755%.

When AdP is realized as a deep FTA in this alternative world (with TTIP, TPP, CETA, EU-JPN, RCEP in place), the real income increase is less pronounced for Peru, Chile and Mexico which deepened their trade relations with TPP countries as a result of TPP. For Mexico, AdP would even bring no additional welfare gains. Costa Rica's and Colombia's real income gain, on the other hand, would be in the same order of magnitude as without the other FTAs. So when the AdP countries orient themselves towards other trade partners, AdP will become less important as a motor of growth for the region.

Next, we describe the changes in sectoral value added and trade patterns that drive these results for each of the five AdP member countries in the deep Pacific Alliance scenario.

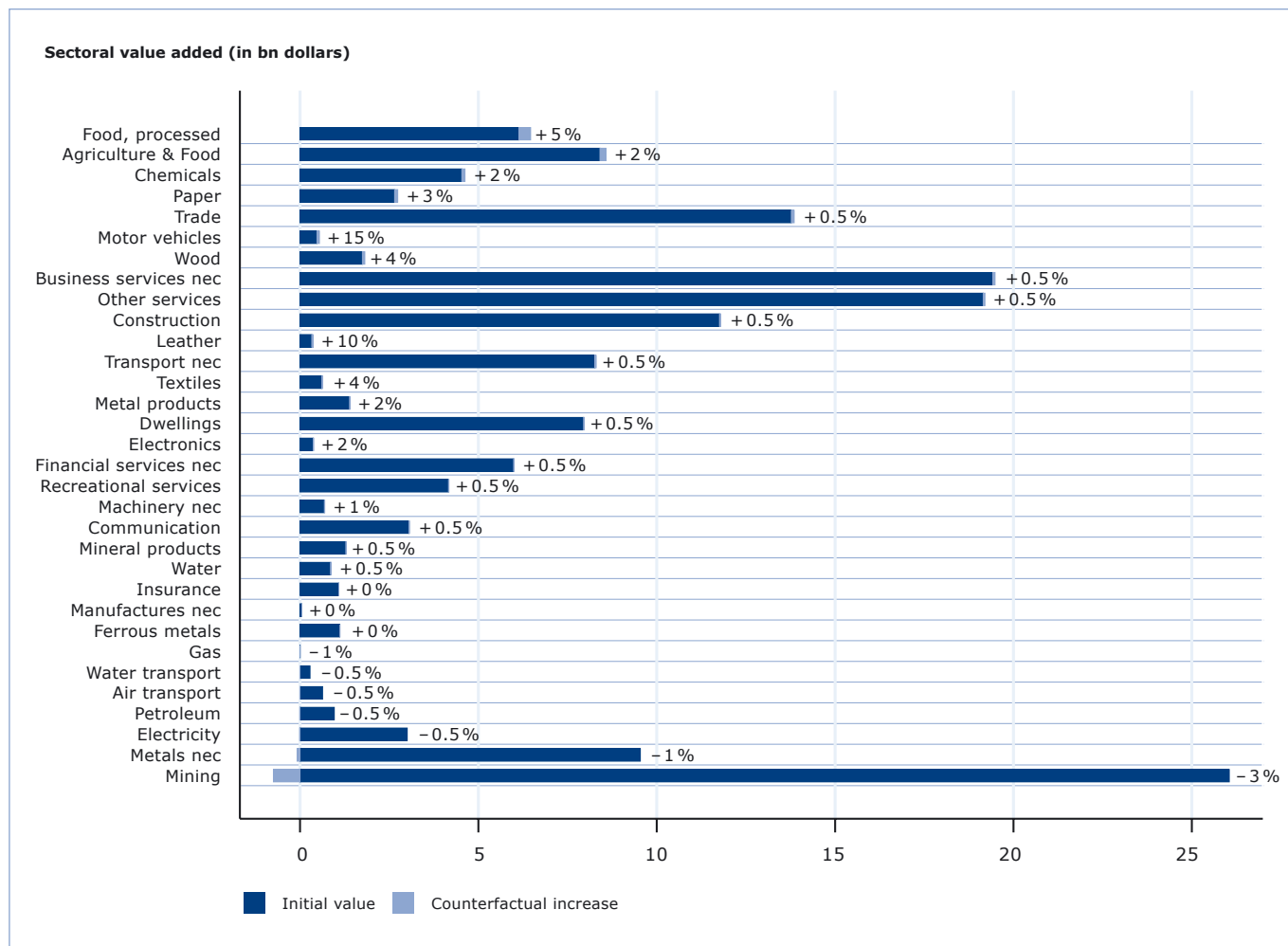


Chile

In Chile, total output increases by 1,435 million dollars or 0.4% with a switch to a deep AdP. This is equivalent to an increase in total value added (or GDP) of 389 million dollars or 0.23%.

Figure 11 shows the initial value added (in billion US dollars) by sector with dark blue bars. In terms of output, Mining, Business services nec, Trade services, Metals nec and Other services are the top 5 sectors for the Chilean economy, with output shares of 13, 9, 9, 8 and 8% respectively. In terms of value added (or GDP), the ranking and relative shares of sectors are somewhat changed. The top 5 sectors are Mining (with a share in total value added of 16%), Business services nec (12%), Other Services (12%), Trade services (8%) and Construction (7%). The differences in ranking stem from differences in sectoral value added intensity. For example, Metals nec uses relatively many intermediates and therefore is not in the top 5 sectors in value added terms.

Figure 11 also shows the change in sectoral value added from a switch from the benchmark to the counterfactual situation (i.e. a deep AdP) with light blue bars. The sectors are ordered in decreasing order of the change in value added. In Chile, the sectors "Processed Food", "Agriculture", "Chemicals", "Paper", "Trade services", "Motor vehicles" and "Wood" expand their production (and thus value added), while, amongst others, the sectors "Mining" and "Metals nec." shrink. The largest relative increases in value added are predicted for the "Motor vehicles" (+15%), "Leather" (+10%) and "Processed Food" (+5%) sectors, even though the former two start from a very low initial level of sectoral value added. Since the largest expansions are found in sectors with relatively lower value added intensities (i.e. sectors which require more imported intermediates), the total output increase is larger than the total value added increase.

Figure 11 Changes in Chilean sectoral value added, deep AdP scenario


Source: Authors' calculations.

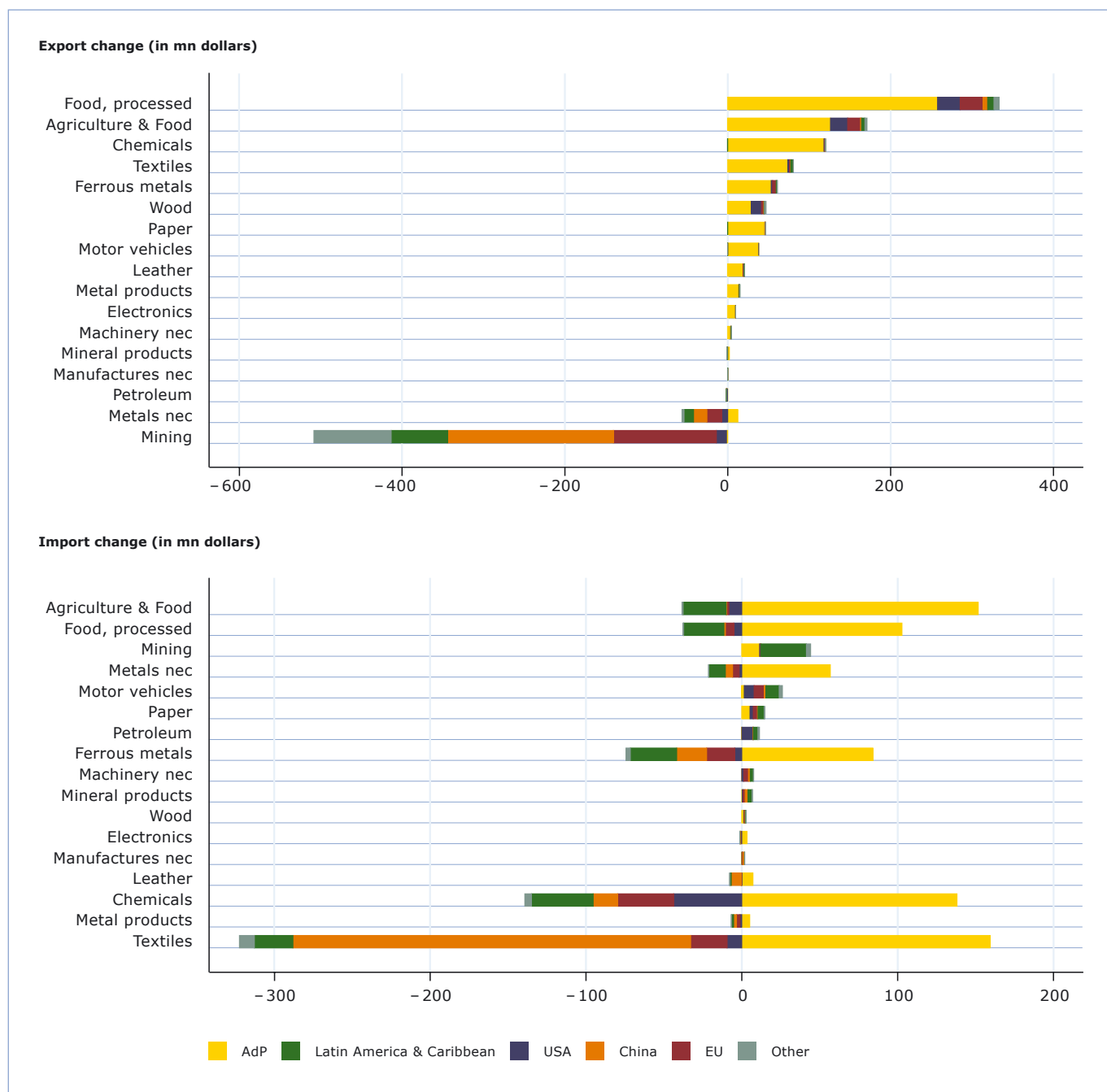
Overall, deep AdP involvement implies a small deindustrialization for Chile. The share of manufacturing in value added decreases by 0.13 percentage points, and the share of agriculture and services increase by 0.09 and 0.04 percentage points, respectively.¹²

Figure 12 shows predicted changes in Chile's imports and exports (in million US dollars) for the manufacturing sectors. In the GTAP data, Mining (37%) and Metals nec. (29%) comprise more than half of Chilean exports, followed by Processed Food (8%), Agriculture & Food (6%), Paper (3%), Chemicals (3%) and Wood (3%). With a deep AdP, Mining exports shrink by 3% and Metal nec exports by -0.07%. On the other hand, exports increase sharply

12 If one looks at output changes instead, we would find that the share of agriculture increases at the expense of manufacturing (-0.01 percentage points) and services sectors (-0.07 percentage points).

for Processed food (334 mn USD or + 16%), Agriculture (+ 10 %) and Chemicals (+ 17%), mainly due to increased exports to AdP partner countries.

Figure 12 Changes in Chilean trade flows (USD mn)



Source: Authors' calculations.

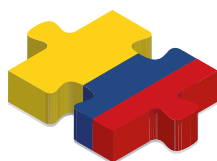
Figure 12 also summarizes bilateral and sectoral trade changes. We show the predicted export and import changes with AdP members, the USA, the EU, Other Latin American and Caribbean countries, China and the Rest of the World ("Other") for the deep Pacific Alliance scenario (in mn USD). First, trade with other AdP members is increased in almost all sectors due to the falling bilateral trade costs. Second, there is a substantial amount of trade diversion with other regions in most, but not all sectors. Chilean imports from other regions are substituted with AdP imports in the sectors "Agriculture & Food", "Chemicals", "Electronics", "Ferrous metals", "Processed Food", "Leather", "Metal products", "Metals nec", and "Textiles". Typically, the trade creation with AdP partners is bigger than the trade diversion with other regions. So overall, the volume of trade increases. Third, in some sectors like "Wood", "Mining", "Mineral products", "Petroleum", "Paper", "Motor vehicles", "Manufactures nec", "Machinery nec", however, imports from other regions are also increased. Two possible explanations can account for this fact.

(1) Many sectors in Chile expand with the Pacific Alliance. This implies increased intermediate demand through input-output linkages. So for some (more upstream) products that are heavily used in the expanding sectors, the increased intermediate demand might dominate the trade diversion effect. This is most likely the case for "Mining", "Petroleum", "Mineral products", "Paper" and "Wood".

(2) An alternative explanation is increased Chilean demand. We have shown above that an average Chilean's real income is expected to increase by 0.5% in the deep Pacific Alliance scenario. This higher income implies increased demand for (domestic as well as foreign) products. So while the demand for other regions' products will go down relative to imports from AdP countries, the income effect can overcompensate the negative trade diversion effect. This is a likely explanation for the import changes in the "Motor vehicles" sector.

In combination, the increased intermediate input and the income channels are opposing forces to trade diversion with other regions. Fourth, exports to all other regions including the AdP members go up in almost all sectors. This indicates that with the falling trade costs Chilean firms have cheaper access to intermediate inputs such that overall their competitiveness and with it their exports increase. Fifth, in Chile there are some exceptions to this rule. Chilean exports fall in the sectors "Mining", "Petroleum", "Mineral products", "Metals nec" and also "Manufactures nec". These are all rather resource-driven sectors. A potential explanation for the effect is that other AdP members become even more competitive in these sectors. This is most evident in the case of Peru, which massively increases its Mining exports to all other regions and replaces Mining exports of the other four AdP countries.¹³

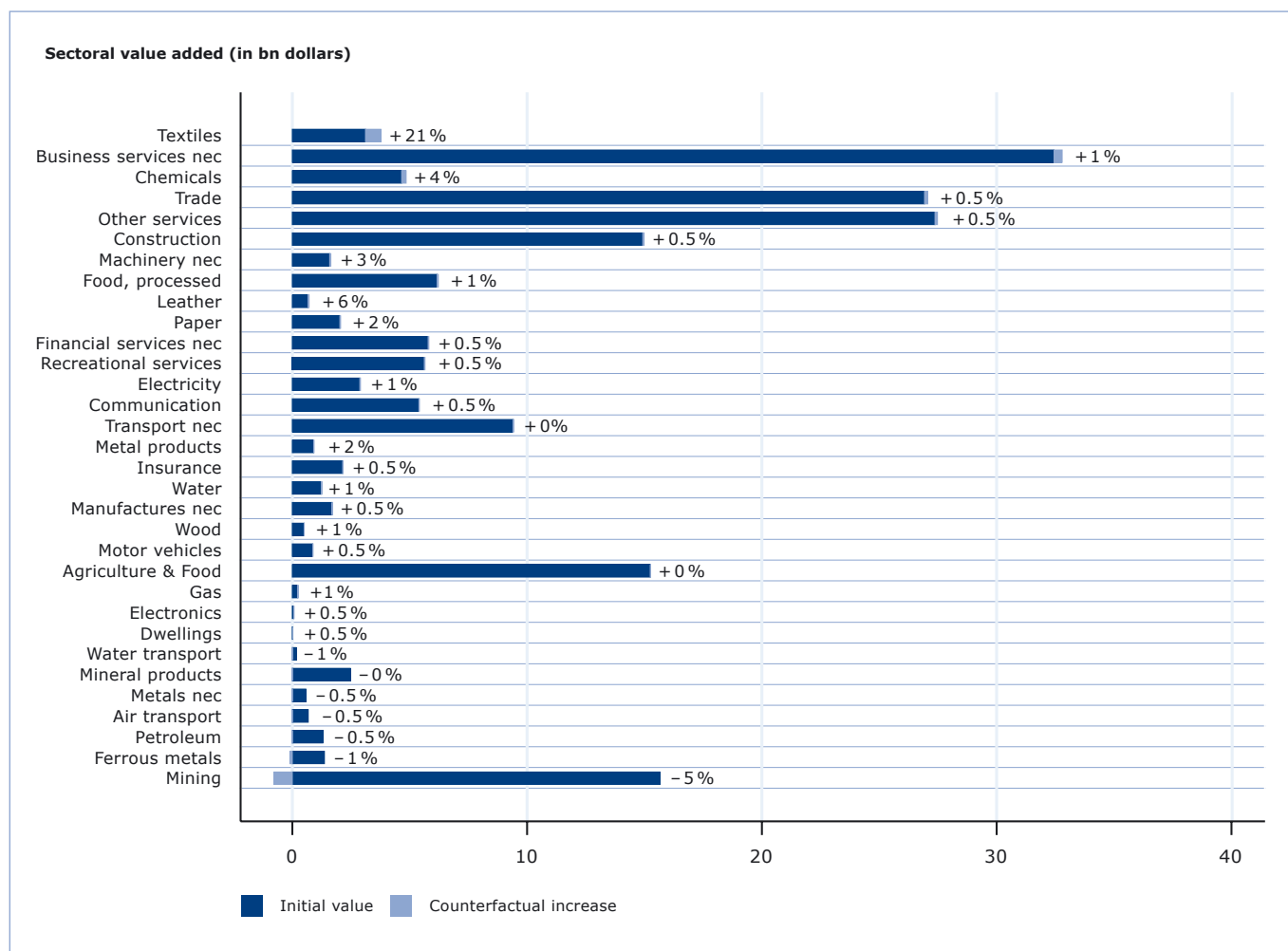
¹³ The trade elasticity is very high in the sectors „Mining“ and „Petroleum“. Thus, even small changes in trade costs imply huge effects on trade flows.



Colombia

In Colombia, total output increases by 2,770 million dollars or 0.8% with a switch to the deep AdP. This is equivalent to an increase in total value added (or GDP) of 966 million dollars. Figure 13 shows the changes in Colombian value added on the sectoral level. In Colombia, the sectors “Textiles”, “Business services nec” and “Chemicals” expand their production (and thus value added), while, amongst others, the sectors “Ferrous metals” and “Mining” shrink. The largest relative increases are predicted for the “Textiles” (+21%), “Leather” (+6%) and “Chemicals” (+4%) sectors, even though the former two start from a low initial level of sectoral value added.

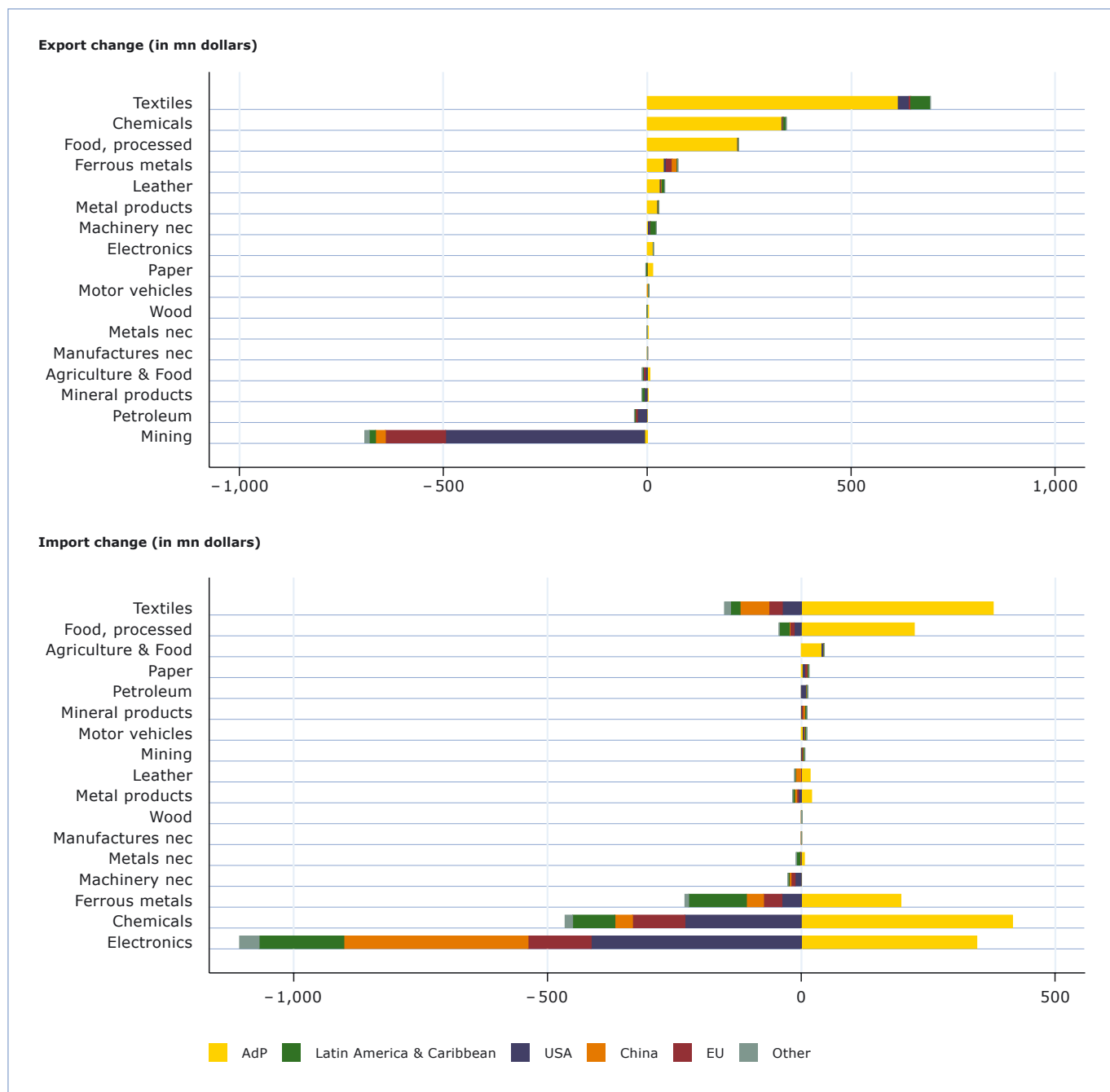
Figure 13 Changes in Colombian sectoral value added, deep AdP scenario



Source: Authors' calculations.

Overall, deep AdP involvement implies a modest degree of reindustrialization for Colombia. The share of manufacturing in value added increases by 0.22 percentage points, and the share of agriculture and services fall by 0.06 and 0.16 percentage points, respectively.

Figure 14 Changes in Colombian trade flows (USD mn)



Source: Authors' calculations.

In Figure 14, we show the predicted export and import changes (in mn USD) with AdP members, the USA, the EU, Other Latin American and Caribbean countries, China and the Rest of the World ("Other") for Colombia for the deep Pacific Alliance scenario. First, trade with other AdP members is increased in almost all sectors due to the falling trade costs. Second, there is a substantial amount of trade diversion with other regions in most, but not all sectors. Colombian imports from other regions are substituted with AdP imports in the sectors "Textiles", "Processed Food", "Metal products", "Machinery nec", "Ferrous Metals", "Chemicals", and "Electronics". In some sectors, the trade creation with AdP partners is bigger than the trade diversion with other regions.

So overall, the volume of trade increases in these sectors. However, for some sectors like "Ferrous Metals", "Chemicals" and "Electronics", the overall level of imports shrinks. This could imply a reduced final demand. But since Colombian's real income level rises, it is more likely that the output of Colombian upstream sectors that make (heavy) use of these goods as intermediate inputs shrank. Third, in some sectors like "Mineral products", "Mining", "Petroleum", "Motor vehicles", "Paper", "Wood", "Agriculture & Food", "Processed Food", and "Manufactures nec", however, imports from other regions are also increased; even though the absolute volumes are mostly small. This implies either an increased intermediate demand through input-output linkages. So for some (more upstream) products that are heavily used in the expanding sectors, the increased intermediate demand might dominate the trade diversion effect.

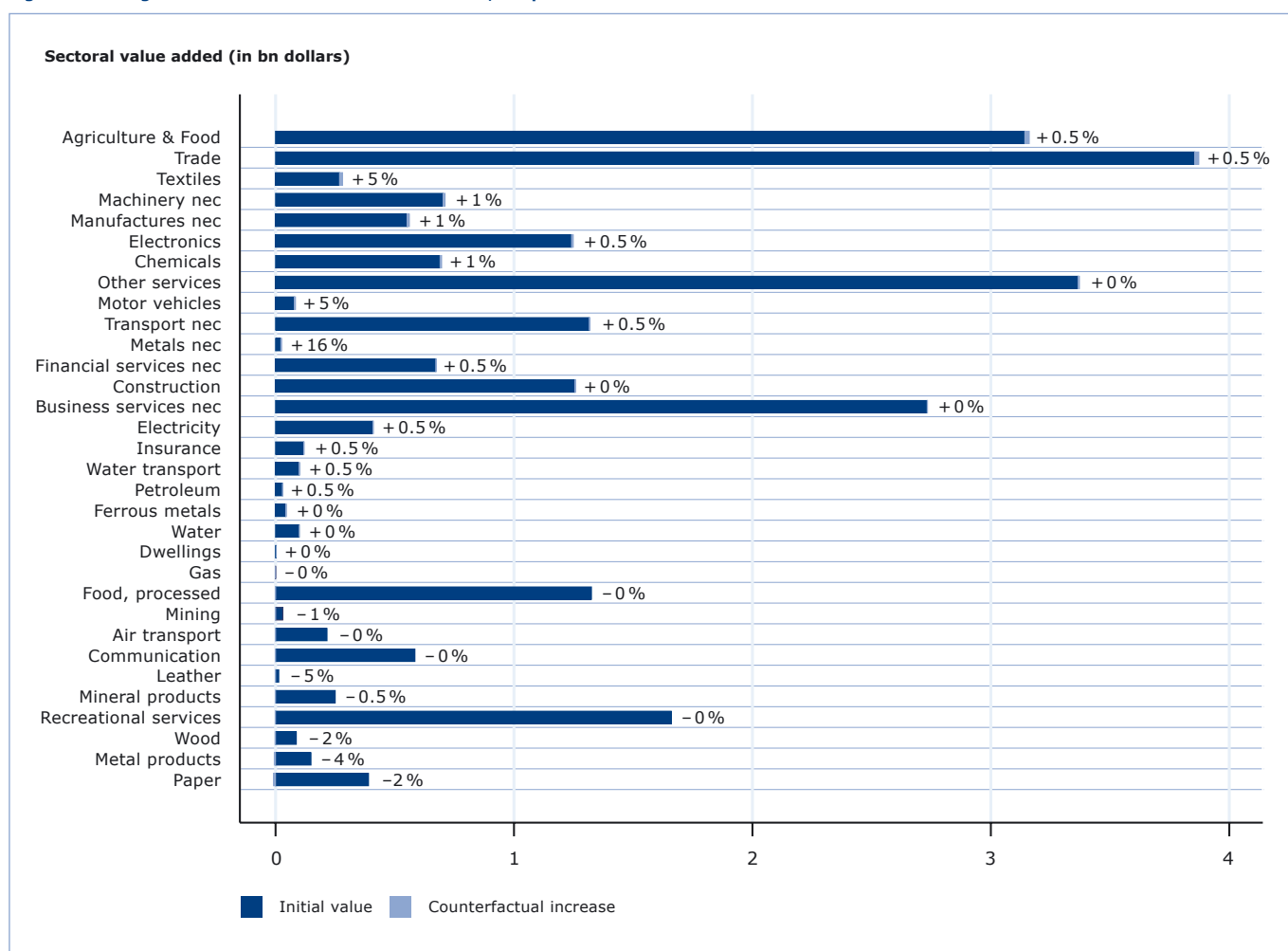
An alternative explanation is increased Colombian demand. We have shown above that an average Colombian's real income is expected to increase by 0.83% in the deep Pacific Alliance scenario. This higher income implies increased demand for (domestic as well as foreign) products. So while the demand for other regions' products will go down relative to imports from AdP countries, the income effect can overcompensate the negative trade diversion effect. This is a likely explanation for the import changes in the "Motor vehicles" sector. In combination, the increased intermediate input and the income channels are opposing forces to trade diversion with other regions. Fourth, exports to all other regions including the AdP members go up in almost all sectors. This indicates that with the falling trade costs Colombian firms have cheaper access to intermediate inputs such that overall their competitiveness and with it their exports increase. Fifth, in Colombia, as shown above for the case of Chile, there are some exceptions to this rule. Colombian exports to all other regions fall in the sectors "Mining", and "Petroleum"; furthermore the exports destined for non-AdP countries fall in the sector "Mineral products" while the exports towards AdP countries still rise. These are all rather resource-driven sectors. The reduced exports go together with a reduced sectoral value added. A potential explanation for the effect is that other AdP members become even more competitive in these sectors. This is most evident in the case of Peru, which massively increases its Mining exports to all other regions and replaces Mining exports of the other four AdP countries.

Costa Rica



In Costa Rica, total output increases by 239 million dollars or 0.5% with a switch to the deep AdP. This is equivalent to an increase in total value added (or GDP) of 83 million dollars. Figure 15 shows the changes in Costa Rican value added on the sectoral level. The largest increases (in absolute terms) in Costa Rica are in the “Agriculture & Food”, “Trade services”, “Textiles”, and “Machinery, nec” sectors.

Figure 15 Changes in Costa Rican sectoral value added, deep AdP scenario



Source: Authors' calculations.

Overall, deep AdP involvement implies a small amount of reindustrialization for Costa Rica. The share of manufacturing and also agriculture in value added increase by 0.10 and 0.02 percentage points, respectively, while the share of services falls by 0.12 percentage points.

In Figure 16, we show the predicted export and import changes with AdP members, the USA, the EU, Other Latin American and Caribbean countries, China and the Rest of the World ("Other") for Costa Rica (in mn USD) for the deep Pacific Alliance scenario.

First, trade with other AdP members is increased in all sectors due to the falling trade costs.

Second, there is a substantial amount of trade diversion with other regions in most sectors, except for "Machinery nec", "Mining" and "Petroleum". In some sectors, the trade creation with AdP partners is bigger than the trade diversion with other regions. So overall, the volume of trade increases in these sectors. However, for some sectors like "Textiles", "Chemicals", "Electronics", "Leather", "Manufactures nec", "Ferrous metals" and "Metals nec", the overall level of imports shrinks. This could imply a reduced final demand. But since Costa Rican's real income level rises, it is more likely that the output of Costa Rican upstream sectors that make (heavy) use of these goods as intermediated inputs shrank.

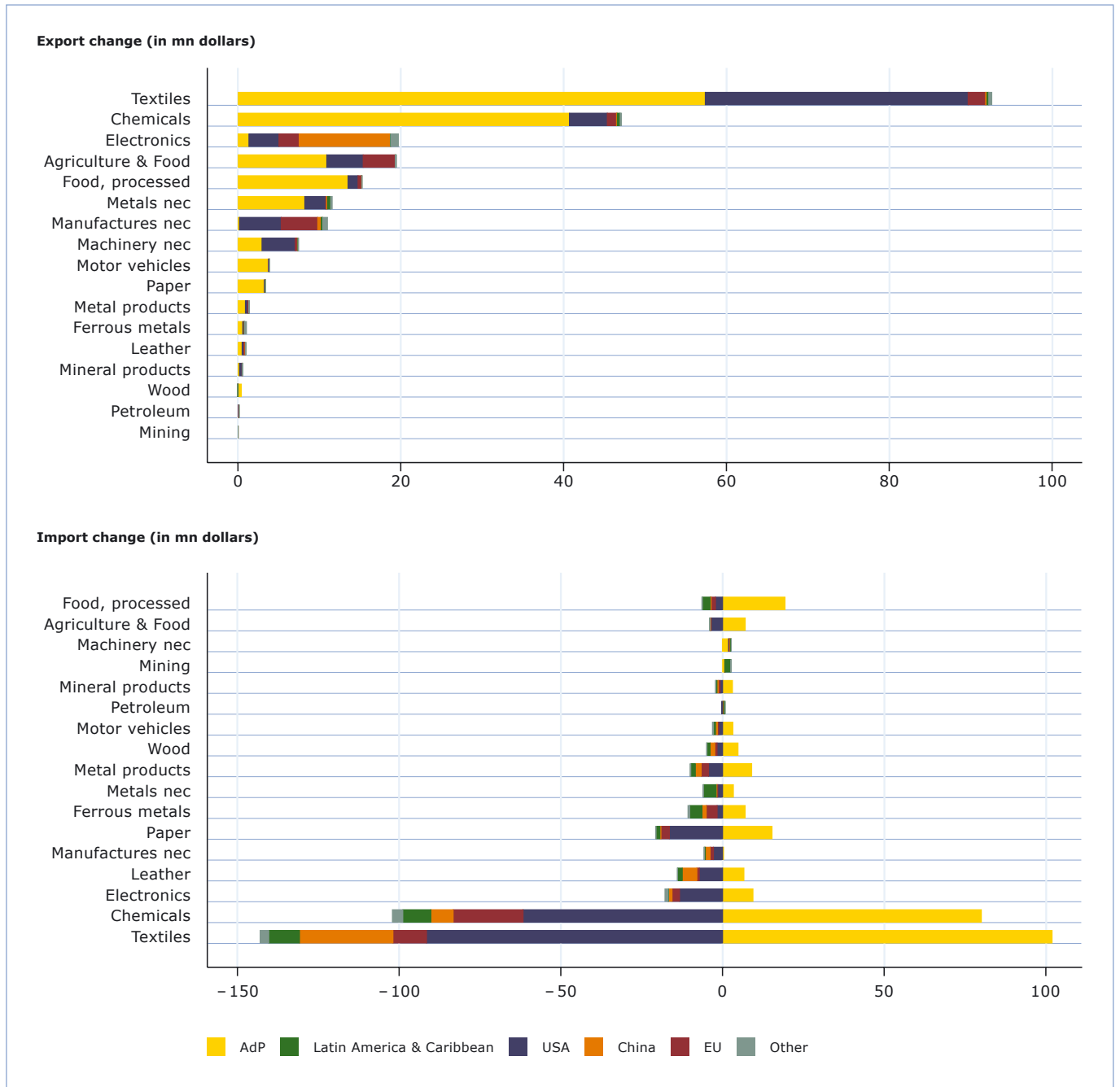
Third, in the sectors "Machinery nec", "Mining" and "Petroleum", not only imports from AdP partners but also imports from other regions are increased. This most likely implies an increased intermediate demand through input-output linkages. So for some (more upstream) products that are heavily used in the expanding sectors, the increased intermediate demand might dominate the trade diversion effect. An alternative explanation is increased Costa Rican demand. We have shown above that an average Costa Rican's real income is expected to increase by 0.811% in the deep Pacific Alliance scenario. This higher income implies increased demand for (domestic as well as foreign) products. So while the demand for other regions' products will go down relative to imports from AdP countries, the income effect can overcompensate the negative trade diversion effect. In combination, the increased intermediate input and the income channels are opposing forces to trade diversion with other regions.

Fourth, exports to all other regions including the AdP members go up in almost all sectors. This indicates that with the falling trade costs Colombian firms have cheaper access to intermediate inputs such that overall their competitiveness and with it their exports increase.

Fifth, in Costa Rica, as shown above for the case of Chile and Colombia, there are some exceptions to this rule. While Costa Rican exports to other AdP countries rise or stay constant in the sectors "Mining", and "Wood", the exports to other regions in these sectors fall slightly. These two sectors are rather resource-driven sectors. A potential explanation for the effect is that other AdP members become even more competitive in these sectors. This is

most evident in the case of Peru, which massively increases its Mining exports to all other regions and replaces Mining exports of the other four AdP countries.

Figure 16 Changes in Costa Rican trade flows (USD mn)



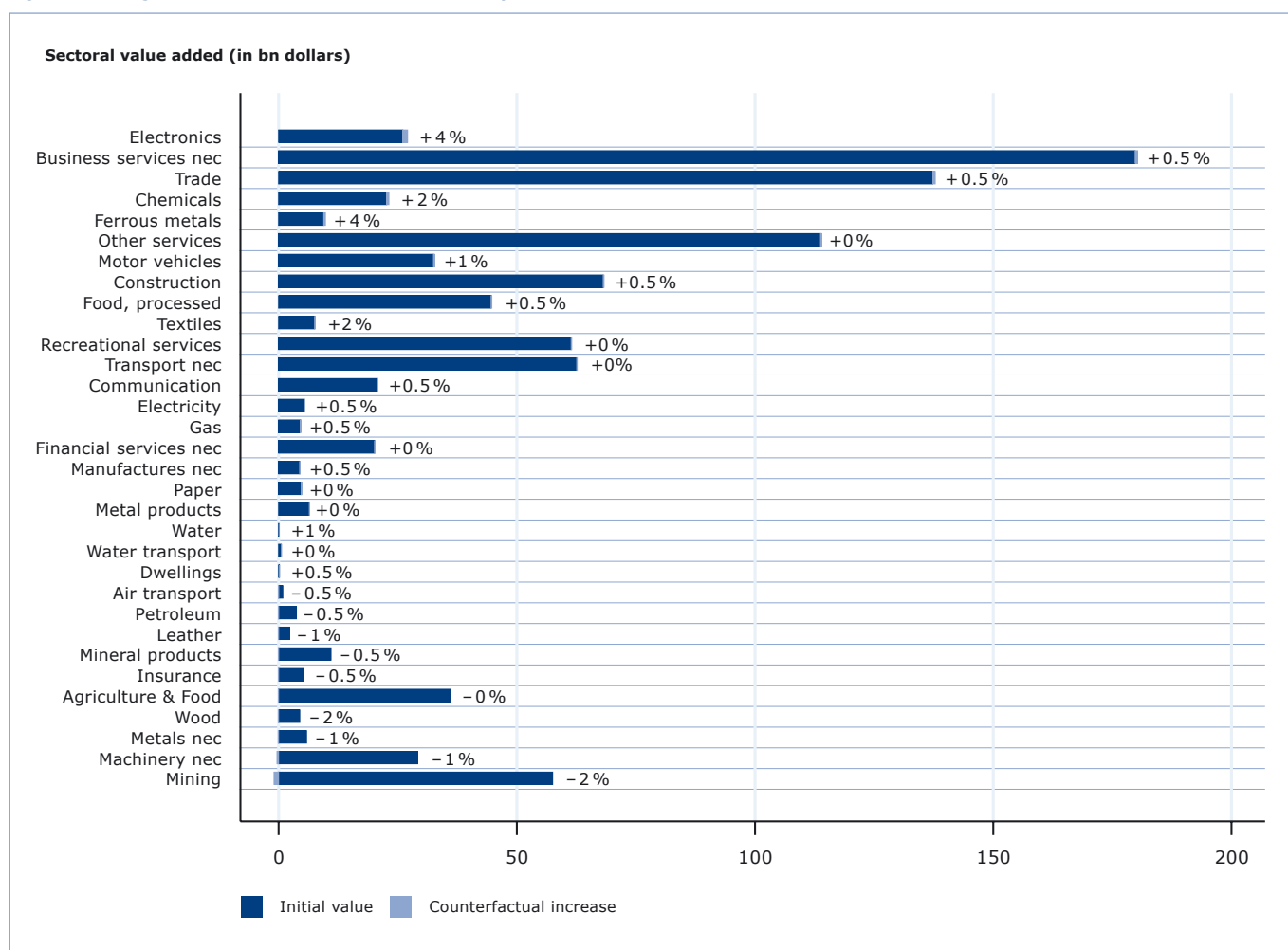
Source: Authors' calculations.



Mexico

In Mexico, total output increases by 5,919 million dollars or 0.4% with a switch to the deep AdP. This is equivalent to an increase in total value added (or GDP) of 2,661 million dollars. Figure 17 shows the changes in Mexican value added on the sectoral level. In Mexico, the sectors "Electronics", "Business services nec", "Trade services", "Chemicals" and "Ferrous metals" expand their production (and thus value added), while, amongst others, the sectors "Mining", "Machinery nec" and "Metals nec" shrink. The largest relative increases are predicted for the "Electronics" (+4%), "Ferrous metals" (+4%), "Chemicals" (+2%) and "Textiles" (+2%) sectors.

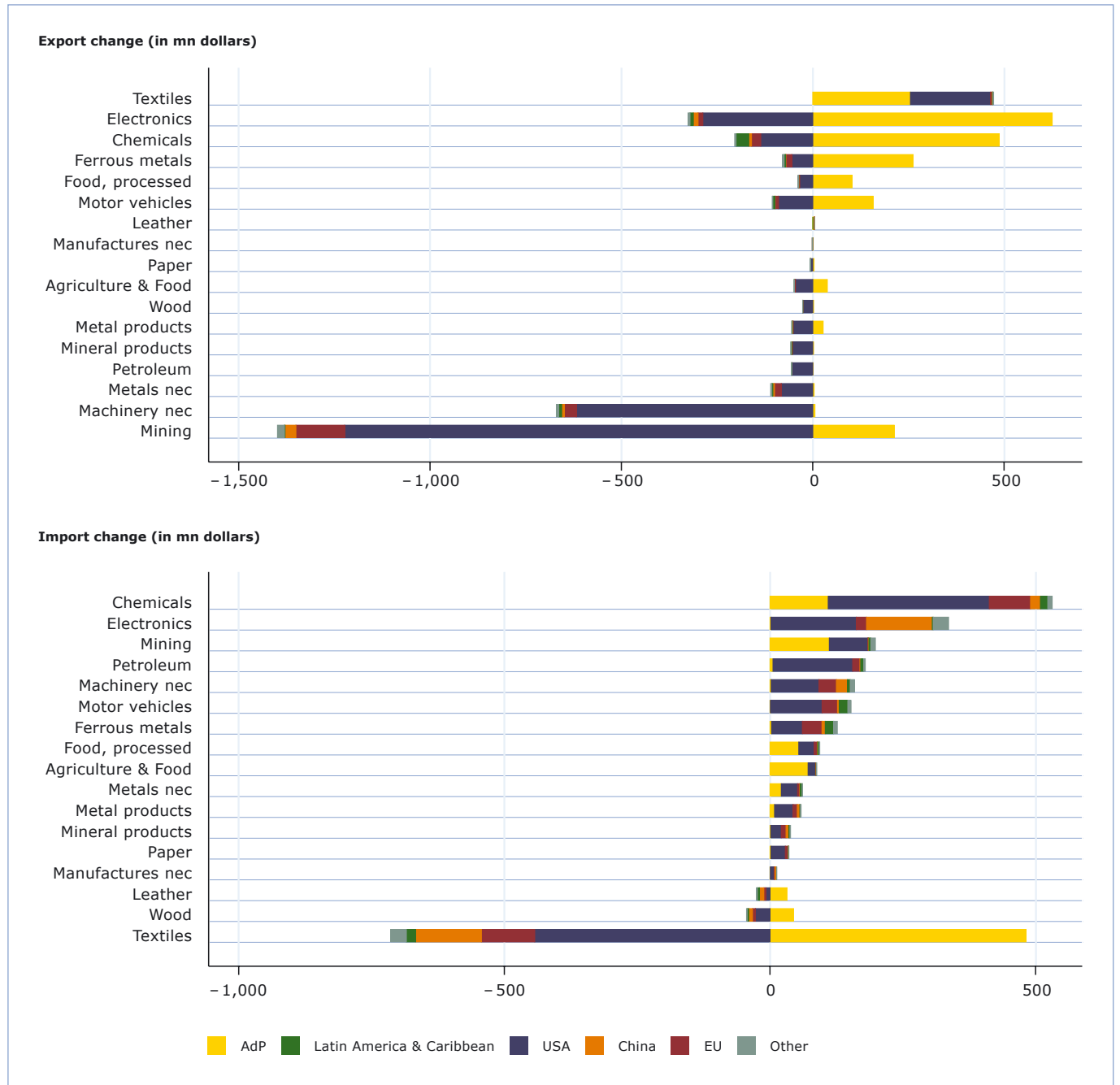
Figure 17 Changes in Mexican sectoral value added, deep AdP scenario



Source: Authors' calculations.

Overall, deep AdP involvement implies a small reindustrialization for Mexico. The share of manufacturing in value added increases by 0.07 percentage points, and the share of agriculture and services fall by 0.02 and 0.05 percentage points, respectively.

Figure 18 Changes in Mexican trade flows (USD mn)



Source: Authors' calculations.

In Figure 18, we show the predicted export and import changes with AdP members, the USA, the EU, Other Latin American and Caribbean countries, China and the Rest of the World ("Other") for Mexico (in mn USD) for the deep Pacific Alliance scenario. First, trade with other AdP members is increased in all sectors due to the falling trade costs. But, Mexican trade patterns behave differently than the trade patterns in the other AdP countries. For most sectors, trade diversion occurs on the export side and only for a few sectors on the import side. In the majority of sectors, Mexican exports to other regions fall. The only exceptions being the "Textiles" and "Leather" sectors. What is more, the total export volume shrinks in a number of sectors. That is, the increased exports to AdP countries do not make up for the lost exports to other regions. These sectors are more resource-driven sectors like "Mining", "Petroleum", "Paper", "Mineral products", "Agriculture & Food", but also "Metal products", "Metal nec", "Machinery nec" and "Manufacturing nec". On the import side, Mexico not only increases its imports from other AdP countries in the majority of sectors. It also increases imports from other regions in all sectors except "Textiles", "Wood" and "Leather". This indicates a different industry structure in Mexico. Mexico focuses on few sectors like "Electronics", "Chemicals" and "Ferrous metals", as well as services industries, which are potentially more downstream and heavily involved in the international production sharing such that a diversified range of intermediates (both domestic and imported) are required. Thus, imports increase across all regions in almost all sectors and trade diversion effects play a minor role. On the other hand, even though imports from other AdP countries increase for "Textiles", "Wood" and "Leather", the overall import level of these sectors drops; i. e. trade diversion dominates in these sectors.

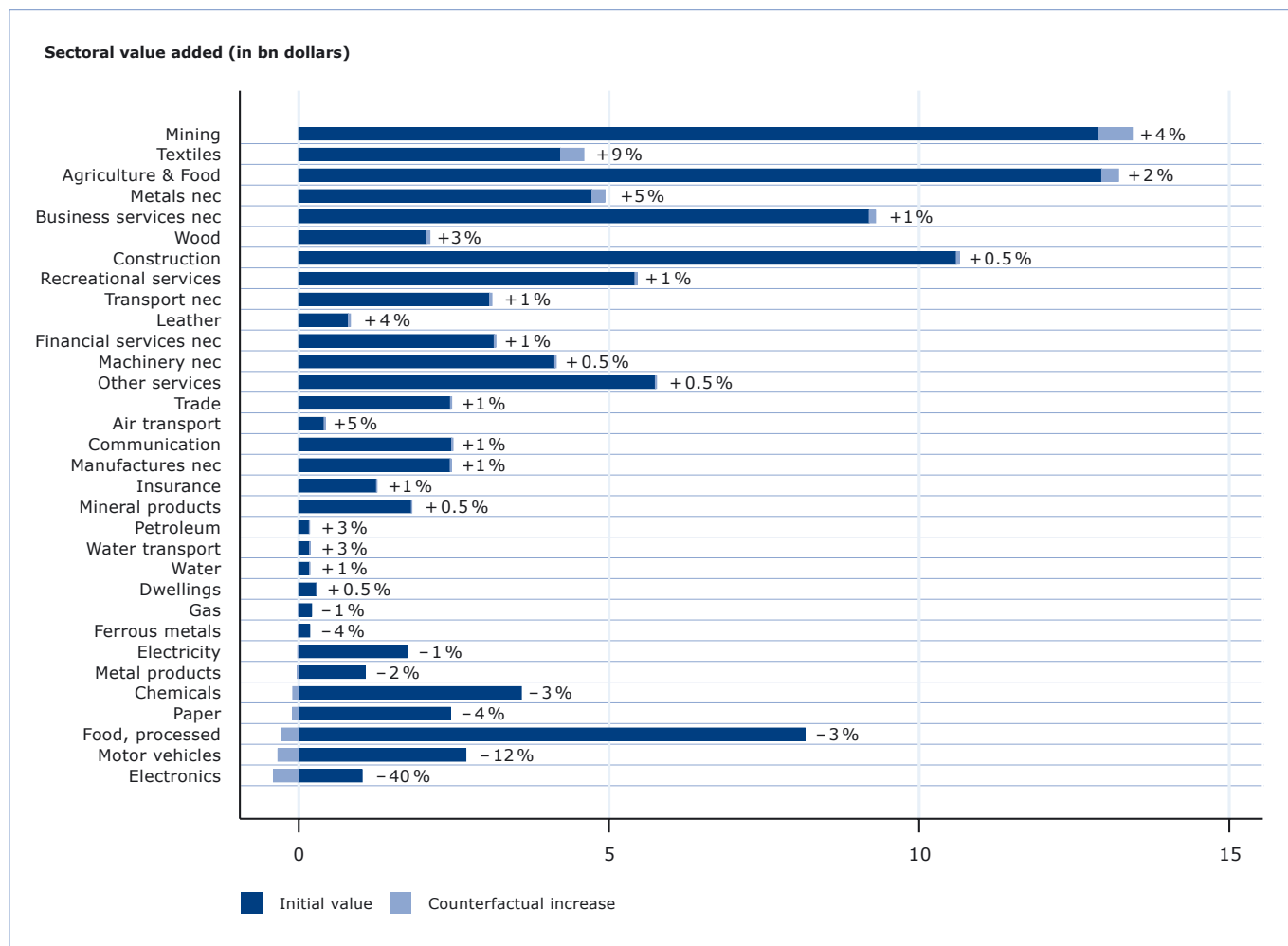


Peru

Last, in Peru, total output increases by 1,154 million dollars or 0.5% with a switch to the deep AdP. This is equivalent to an increase in total value added (or GDP) of 629 million dollars. Figure 19 shows the changes in Peruvian value added on the sectoral level. Peru gains value added in particular in the "Mining", "Textiles", "Agriculture & Food", "Metals nec." and "Business services nec" sectors, while, amongst others, the sectors "Electronics", "Motor vehicles", "Processed Food", "Paper" and "Chemicals" shrink. It is apparent that while some effects look huge in relative terms (e. g. a 40% drop in Peru's Electronics sector), they are rather small when the absolute changes in value added are considered.

Overall, deep AdP involvement implies a small deindustrialization for Peru. The share of manufacturing in value added shrinks by 0.28 percentage points, and the share of agriculture and services increases by 0.16 and 0.12 percentage points, respectively.

Figure 19 Changes in Peruvian sectoral value added, deep AdP scenario

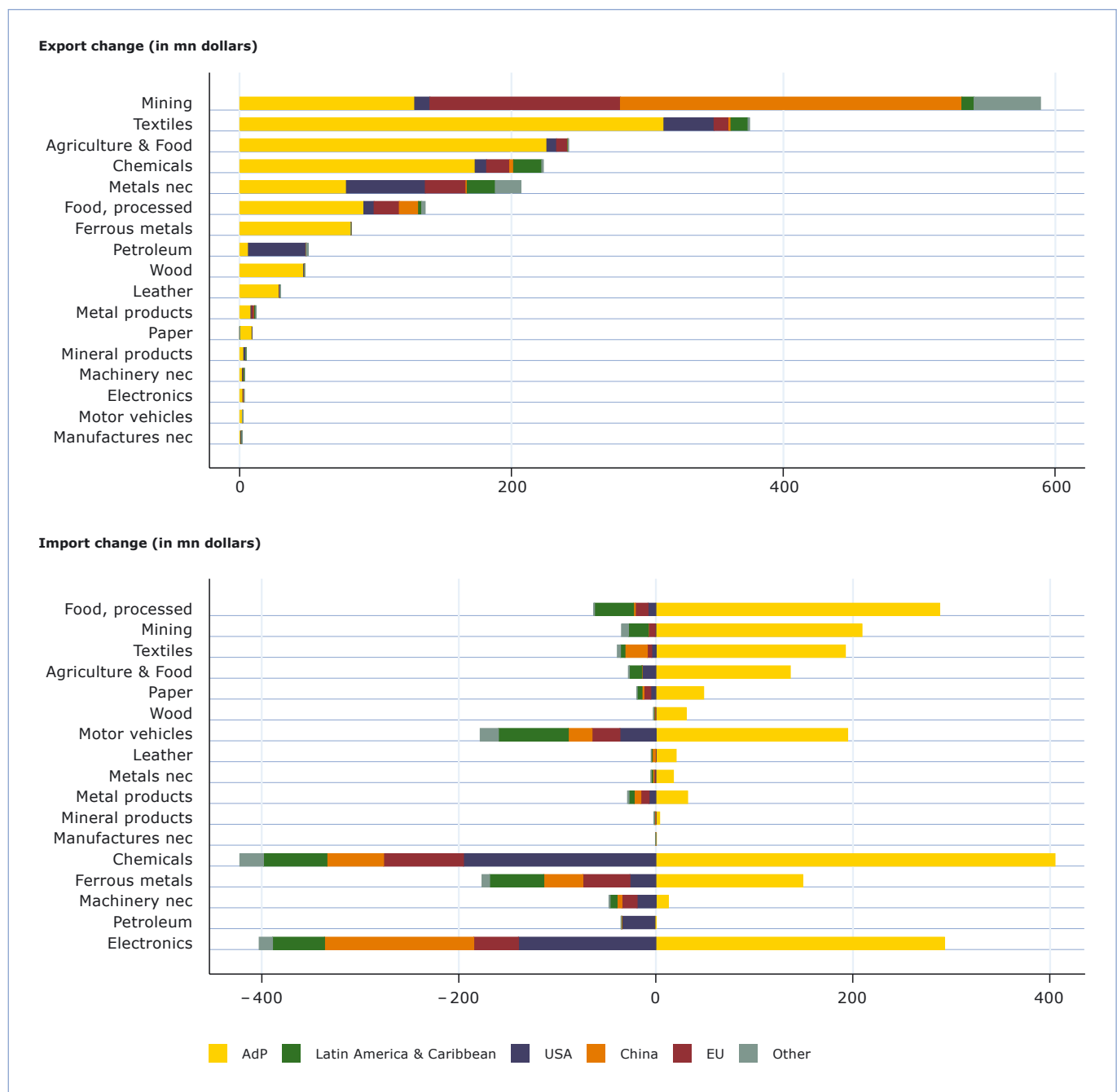


Source: Authors' calculations.

In Figure 20, we show the predicted export and import changes (in mn USD) with AdP members, the USA, the EU, Other Latin American and Caribbean countries, China and the Rest of the World ("Other") for Peru for the deep Pacific Alliance scenario. First, trade with other AdP members is increased in all sectors due to the falling bilateral trade costs. Second, there is a substantial amount of trade diversion with other regions in all sectors. In most of the sectors, though, the trade creation with AdP partners is bigger than the trade diversion with other regions. So overall, the volume of trade increases in these sectors. However, for some sectors like "Chemicals", "Electronics", "Ferrous metals", and "Machinery nec", the overall level of imports shrinks. This could imply a reduced final demand. But since Peruvian's real income level rises, it is more likely that the output of Peruvian downstream sectors that make (heavy) use of these goods as intermediated inputs shrank. Third, exports to all other regions including the AdP members go up in almost all sectors except for "Paper". This indicates that with the falling bilateral trade costs Peruvian firms have cheaper access to intermedi-

ate inputs such that overall their competitiveness and with it their exports increase. Fourth, in Peru, in the majority of sectors the biggest part of the trade effect stems from trade creation with the AdP. Increased exports to other regions outside the AdP only matter for few sectors like "Mining", "Metal nec", "Textiles" and "Chemicals". It appears that Peru has a comparative advantage in these sectors.

Figure 20 Changes in Peruvian trade flows (USD mn)



Source: Authors' calculations.

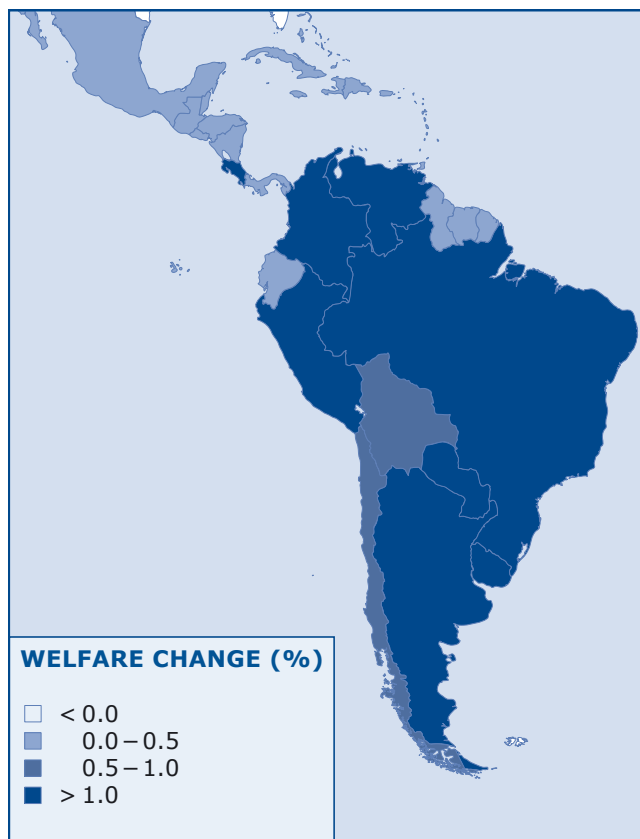
In summary, the sectoral reactions and trade creation and trade diversion effects are very country-specific. The AdP countries tend to increase their exports in sectors where they have a comparative advantage. Also, trade diversion effects on the import side are often overcompensated by the increased requirement for intermediates via input-output linkages, especially for upstream sectors. Even though welfare increases in all countries, some sectors shrink while others expand. The model we employ assumes full employment. Employment moves swiftly between sectors. However, in reality, it might take time for these adjustments to take place and in the medium run at least, we might expect temporary unemployment, dampening the positive welfare effects.

4.2 EFFECTS OF TRADE LIBERALIZATION BETWEEN ADP AND MERCOSUR COUNTRIES

The two most important economic blocs in Latin America are the AdP and the MERCOSUR region. So far, these two blocs did not liberalize their trade flows with the exception of the ANDEAN-MERCOSUR, the MERCOSUR-Chile and the Mexico-Uruguay regional trade agreements (see Figure 01). Could the AdP countries reap additional gains from trade if these two regions were to establish an AdP-MERCOSUR free trade area? To investigate this, we simulate scenarios of tariff reductions as well as shallow and deep reductions of NTMs. The presentation of results will focus on welfare gains.

If a deep AdP-MERCOSUR FTA could be negotiated, the MERCOSUR and all AdP countries would benefit (see Figure 21). The MERCOSUR countries are expected to gain most from an AdP-MERCOSUR FTA. Their predicted real income gain is, on average, around 20%. This gain can mostly be attributed to a deepening of MERCOSUR from a shallow to a deep FTA. If only the MERCOSUR were to deepen their regional integration, our model predicts an average welfare gain of 19.64% for MERCOSUR countries. If simultaneously the AdP would be deepened but without regional integration between the two blocs, the average welfare gain for MERCOSUR countries is 19.63%. So the additional gain from an integration of MERCOSUR and AdP is about 0.4 percentage points higher real income gains, and thus comparatively small compared to the gains from regional integration within MERCOSUR.

"If a deep AdP-MERCOSUR FTA could be negotiated, the MERCOSUR and all AdP countries would benefit."

Figure 21 Real income effects of a deep AdP-MERCOSUR FTA

Source: Authors' calculations.

The biggest winners among the AdP countries are Costa Rica and Peru and to a lesser extent also Colombia. These three AdP countries have larger initial trade flows with MERCOSUR (see Figure 06), and so a larger proportion of trade can benefit from the trade cost reductions. Mexico has a moderate gain in real income of 0.3%. Chile also gains 0.6% in real income. But since Chile already has a deep FTA with MERCOSUR, these gains mostly stem from within AdP trade integration (which increases Chile's real income by 0.47%) rather than trade integration with MERCOSUR countries. Other Latin American and Caribbean nations will, on average, also slightly benefit from the AdP-MERCOSUR FTA.

Table 11 AdP-MERCOSUR integration scenarios: Real income changes

Region	Real income change (in %)		
	Scenario: AdP-MERCOSUR integration		
	Deep	Tariffs only	Shallow
Costa Rica	4.393	-0.049	2.421
Peru	3.250	-0.038	0.667
Colombia	1.606	-0.052	-0.041
Chile	0.618	-0.008	0.072
Mexico	0.352	0.034	0.044
MERCOSUR	19.967	0.043	0.048
Latin America & Caribbean	0.206	-0.006	-0.007
Africa	0.157	-0.005	-0.005
Other	0.078	-0.002	-0.002
USA	0.030	0.003	-0.002
EU	0.015	-0.001	0.000
Rest of Europe	0.007	0.000	0.000
Other Asia	0.001	-0.003	-0.002
Other OECD	-0.005	-0.002	-0.002
China	-0.070	-0.004	-0.005

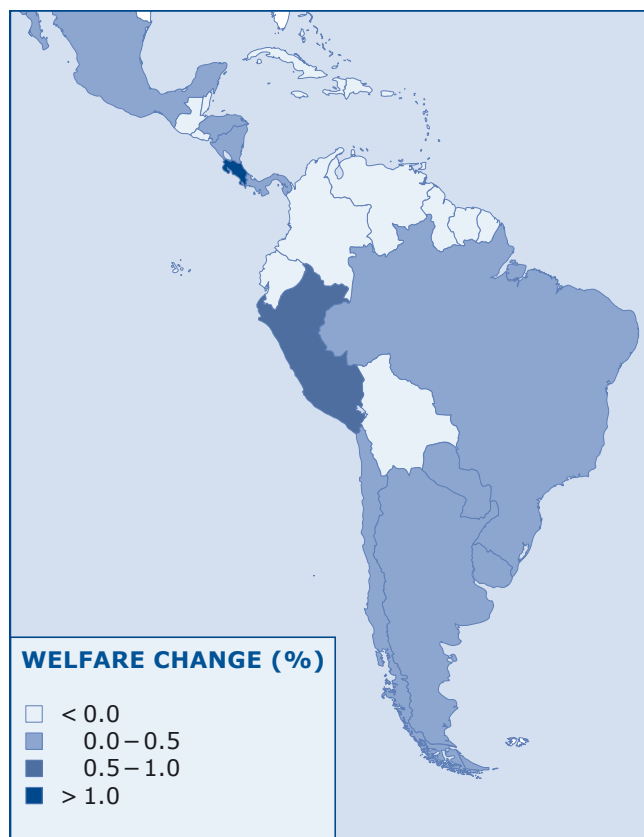
Source: Authors' calculations.

Figure 22 Real income effects of a tariffs-only and shallow AdP-MERCOSUR FTA

(a) Tariffs only



(b) Shallow AdP-MERCOSUR FTA



Source: Authors' calculations.

While a deep regional trade integration with MERCOSUR seems advisable for all AdP, shallow trade liberalization efforts are not. In a potential scenario where AdP countries and MERCOSUR eliminate their tariffs but there is no further elimination of NTMs, all AdP countries except Mexico would suffer a welfare loss, whereas for MERCOSUR countries real income would go up by 0.05%, on average. When in addition to the elimination of tariffs, non-tariff trade barriers are also reduced (shallow AdP-MERCOSUR scenario) Costa Rica and Peru would also gain from the AdP-MERCOSUR FTA, while Chile and Mexico have negligible welfare gains and Colombia would even suffer a small welfare loss.

In summary, MERCOSUR countries would profit from an AdP-MERCOSUR FTA independent of the depth of trade liberalization. For most AdP countries, however, only a deep trade liberalization scenario seems profitable.

4.3 EFFECTS OF A LATIN AMERICAN FREE TRADE AREA

Another option for Latin America is to disentangle the spaghetti bowl of multilateral and bilateral FTAs and form one big regional trade bloc. This would certainly simplify rules of origin and reduce red tape. Whether this is achievable from a political point of view notwithstanding, we simulate the welfare effects of forming a Latin American free trade area.

All AdP countries as well as all other Latin American and Caribbean countries would profit from the formation of a deeply regionally integrated free trade area in Latin America. The real income increases in AdP member countries are substantially larger than with the formation of a deep Pacific Alliance only, compare Table 12. For example, Costa Rica would see an increase in real income of 4.4% compared to 0.8% with AdP only. Peru would have an increase of 3.5% instead of 1.9%. Other Latin American and Caribbean countries would benefit from a deep Latin American free trade area as well. On average, their real income is expected to go up by 2.1%. MERCOSUR countries would benefit most from an Latin American FTA, with welfare gains of 20% on average.

If the Latin American countries would only achieve to eliminate all tariffs between Latin American and Caribbean countries, Costa Rica, Mexico and Chile would profit slightly whereas Colombia and Peru would suffer a small reduction in real income of roughly 0.03%. The option of a shallow Latin American free trade area would increase gains from trade for some countries, in particular Costa Rica and Peru, but would have little effect on the other three AdP countries.

Figure 23 Real income effects of deep Latin America FTA

Source: Authors' calculations.

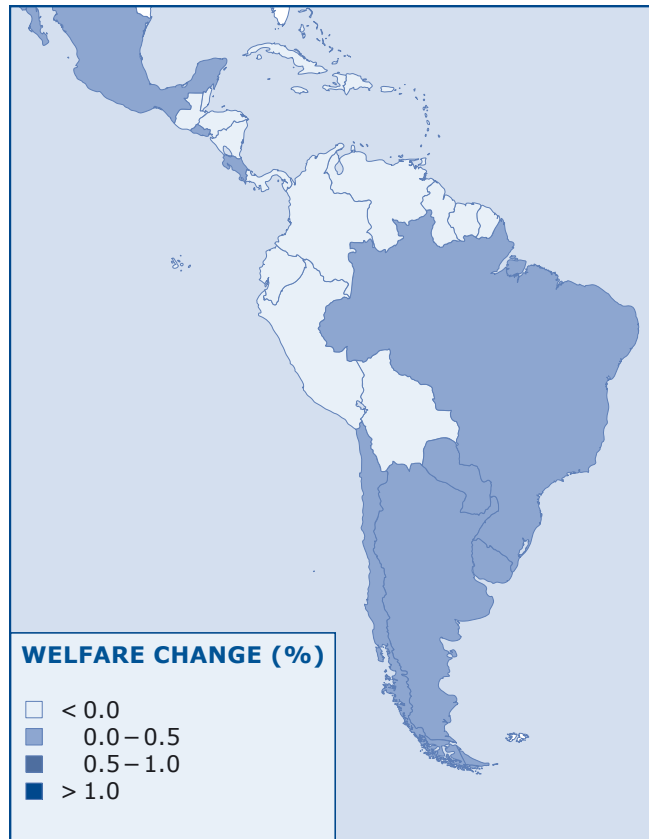
Table 12 Latin American FTA scenarios: Real income changes

Region	Real income change (in %)			
	Scenario: LAFTA			Deep AdP
	Deep	Tariffs only	Shallow	
Costa Rica	4.437	0.079	2.562	0.811
Peru	3.490	-0.033	0.682	1.870
Colombia	1.841	-0.038	-0.029	0.830
Chile	0.738	0.009	0.089	0.470
Mexico	0.373	0.041	0.052	0.122
MERCOSUR	20.043	0.050	0.071	-0.003
Latin America & Caribbean	2.180	-0.095	0.498	-0.008
Africa	0.157	-0.005	-0.004	0.002
Other	0.081	-0.002	-0.001	0.000
USA	0.030	-0.001	-0.003	0.003
EU	0.018	0.000	0.000	0.000
Rest of Europe	0.006	0.000	0.001	0.001
Other Asia	-0.004	-0.003	-0.003	-0.005
Other OECD	-0.006	-0.002	-0.003	-0.001
China	-0.079	-0.003	-0.006	-0.006

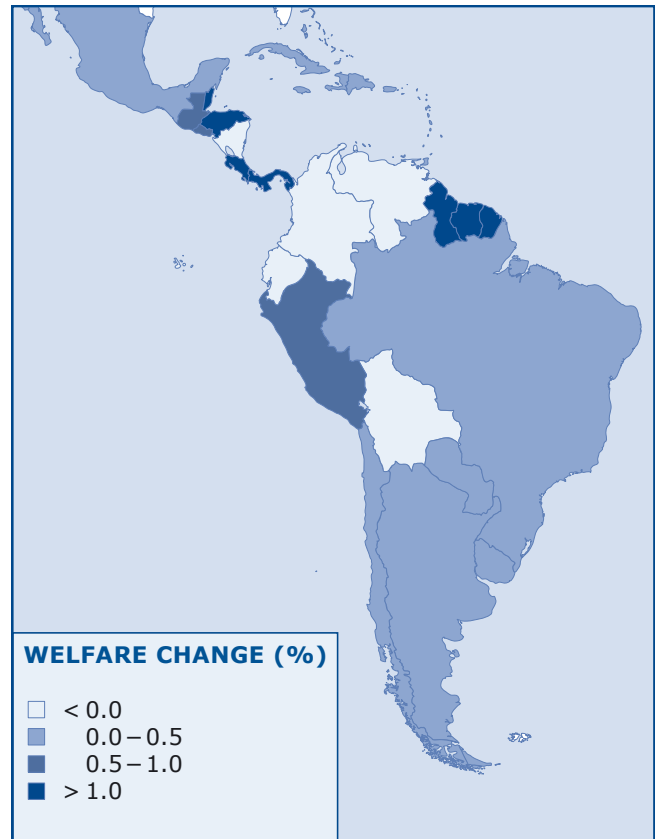
Source: Authors' calculations.

Figure 24 Real income effects of tariffs-only and shallow Latin America FTA

(a) Tariffs only



(b) Shallow Latin America FTA



Source: Authors' calculations.

V POLICY IMPLICATIONS



Today, the intensity of economic integration in Latin America is low. 92 % of the trade flows between members of the Pacific Alliance is affected by bilateral trade arrangements, only 4.6 % of AdP exports flow to other AdP destinations. Something similar occurs on the larger regional level. Even though 80 % of the bilateral trade in Latin America and the Caribbean enjoys tariff preferences (Estevadeordal et al. 2009),¹⁴ in 2012 intraregional trade only represented 22 % of the total compared to 26 % in Asia and 63 % in the European Union. Moreover, as noted by Ulloa and Marambio (2014), in 2010, the intensity of intra-industrial trade within Latin America was less than in the Asia-Pacific region 25 years ago, and less than half of the current intra-industrial trade in Asia-Pacific.¹⁵

This is despite the 60 or so bilateral and multilateral FTAs in force in the region. With some overlaps, six blocs with heterogeneous characteristics have formed in the region: next to AdP there are LAIA, MERCOSUR, and ANDEAN in South America, and ACS and CACM in Central America and the Caribbean. However, so far, these agreements have failed to foster intra-regional economic integration. As a telling example, between 1995 and 2012, the share of exports among MERCOSUR countries decreased from 19.5 % to 15 %.

"Even though 80 % of the bilateral trade in Latin America and the Caribbean enjoys tariff preferences, in 2012 intraregional trade only represented 22 % of the total compared to 63 % in the EU."

¹⁴ This 20 % of intraregional trade is carried out among countries without trade agreements and concentrates on the so-called "missing links", such as North America with Brazil and Venezuela, and between Brazil and Central American and Caribbean countries (Ulloa and Marambio, 2014).

¹⁵ The Index is taken from Blyde (2014), and it is estimated using trade in manufactures data collected by COMTRADE of the United Nations.

"In the case of AdP countries, the commercial potential for exchange is underexploited."

In the case of AdP countries, the commercial potential for exchange is underexploited. One explanation is that during the last 20 years, these countries have deeply integrated mainly with the USA, but also with the EU and Asia. This has crowded out regional trade. Another explanation is that there are important remaining trade barriers in the region. Indeed, the present study shows that, among the AdP countries, there is still considerable room for the reduction of both tariffs and *non-tariff measures* (NTMs) costs. More ambitious trade liberalization efforts could result in a reduction of average trading costs between 10 and 20%, particularly in the case of Colombia and Peru. Additionally, trade costs generated by natural and cultural barriers existing among these countries are at least as relevant. In this sense, two aspects forcefully attract our attention:

The first is that, although the geological setup of the region implies a strong role for natural barriers, there are certain distortions that indicate room for their reduction. For example, it is not consistent in logistical terms that Costa Rica has the highest natural barriers of all AdP countries and the rest of Latin America, since its geographical location should leave it at least in a better logistic position than Chile. In turn, the latter presents physical transaction costs with Latin America that are not very different from those of Peru, which is also not consistent with the comparably advantageous geographic location that Peru has within Latin America.

A second striking element is that, although Latin America is the world's most culturally homogeneous region, the costs generated by cultural barriers are generally higher than those of NTMs. It is revealing that the data show a greater amount of cultural homogeneity among the AdP countries than among these and the rest of Latin American countries. This difference is particularly high in the case of Chile.

Because the various non-tariff barriers are so much more important than tariffs in the AdP countries and within the region, the main contribution of this study is to quantitatively analyze the impact that a deep trade integration effort may produce.

In order to obtain quantitative results, this study develops a model that allows separating the effects of the AdP from those of existing agreements. For this purpose, a *New Quantitative Trade Theory* model is employed. An extension of the *Eaton and Kortum (2002) model*, the setup features multiple sectors that are linked, within and across countries, by input and output linkages. This makes sure that it captures the effects of FTAs on supply chains on a national, regional and global level. The model gives rise to a *gravity equation* which can be estimated econometrically to obtain estimates of the key structural parameters.

Based on data for 134 countries and 32 sectors the *gravity equation* explains 70% to 80% of the bilateral trade flow variation. It shows that, in all manufacturing sectors, the variables with the highest predictive power are tariffs, the distance between the countries, their contiguity, a common language (with the exception of the mining sector) and a common colonial history. In the services sectors, the most significant variables are the existence of a deep FTA, contiguity and a common colonial history.

Due to its high explanatory power, this model allows simulating the economic impact (measured in terms of real income gains) of different regional integration scenarios on an AdP level, of an AdP agreement with MERCOSUR or of Latin America as a whole. This is done through the evaluation of different integration levels, starting with a superficial integration level (only tariffs and some reduced NTM costs), then an intermediate level (tariffs and eliminated NTM, except in sensitive sectors like agriculture, services and food) and a deep one (both tariffs and NTMs completely eliminated).

The results obtained in the different trade integration scenarios enable us to draw four general conclusions:

1. An AdP limited to a tariff agreement would be largely ineffective.
2. The AdP's most relevant economic impact is guaranteeing the execution of the bilateral agreements previously signed among its members.
3. The opening of global markets has a higher impact than the AdP.
4. Trade integration between the AdP and MERCOSUR or all of Latin America and the Caribbean would have a very significant economic impact.

1. An AdP limited to a tariff agreement would be largely ineffective.

If AdP were limited to the reduction of tariffs, this study shows that its impact would be close to zero. Something similar happens if the integration were to be shallow, except in the case of Peru, which would obtain a real income gain close to half of that in a scenario of deep integration of the bloc.

In contrast, a scenario of deep integration amongst the AdP could yield significant economic benefits for its members, and Peru would be the country to benefit the most. Its real per capita income could go up by 1.9%. Second are Colombia and Costa Rica with increases of 0.8%. With a growth of just 0.1% in its real per capita income, Mexico is the AdP country that obtains the smallest economic benefits from the AdP. This is explained by the fact that it is a very large economy, and highly dependent on its trade with the USA. Meanwhile, Chile would experience a moderate benefit of 0.47% in terms of growth of its real income.

As it could be expected, an intermediate depth of integration in the AdP would have a more limited impact than a deep integration. However, its effect would still be quite significant. In this case, it would be a deep integration in terms of tariffs and NTMs in all sectors, except in agriculture, food and services. This could be a realistic and quite cost-efficient option in political terms.

2. The AdP's most relevant economic impact is guaranteeing the execution of the bilateral agreements previously signed among its members.

This is because when isolating the effect of the wave of bilateral agreements signed among AdP member countries since 2007 to this date, assuming they are all in full force, the results indicate that the AdP, except in the case of Costa Rica, does not add any additional significant effect. This suggests what the first internal purpose of the AdP should be. In this regard, given the fact that it is just an assumption that the current bilateral FTAs are implemented as deeply as they appear *de jure*, clearly the AdP will contribute to a real deepening of these agreements.

3. The opening of global markets has a higher impact than the AdP.

In fact, one of the scenarios analyzed in this study is related to the impact of the AdP in a context where a series of other important trade agreements, currently under negotiation, are successfully concluded, such as the FTA that Chile, Mexico and Peru are negotiating with other countries of the Asia-Pacific (TPP), the FTAs between the EU and Canada (CETA), with the USA (TTIP) and with Japan, respectively; or the Regional Comprehensive Economic Partnership (RCEP) that ASEAN countries are negotiating with trade partners in Asia and the Pacific such as China, Australia, etc.

If these agreements were to come into effect, it would mean a real income growth of 7.8% for the set of OECD member countries, of 5% for the USA and 3.6% for the EU. It is interesting that some countries of the AdP that are not directly involved in these agreements also have an impact in terms of growth of their real income, such as Colombia, which would have a medium positive effect of 0.64%, and Costa Rica, which suffers a negative impact of -0.75%. Among the countries that take part in the TPP negotiations, Peru would feel the highest economic impact with an increase of 5% of real per capita income, while for Chile and Mexico it would imply an income growth of 1% and 0.64% respectively.

Therefore, on one hand the impact of these global agreements is significantly greater than the impact generated by a deep trade integration of the AdP. Additionally, as the results of this study show, if we also analyze the incremental impact the AdP has in a scenario where these global agreements come into force, this effect is very marginal for its member countries, with the exception of Colombia and Costa Rica.

This only confirms the relevance of the strategy that the countries of the AdP have generally adopted, which is opening their markets globally while establishing a parallel agenda for regional integration.

4. Trade integration between the AdP and MERCOSUR or all of Latin America and the Caribbean would have a very significant economic impact.

First of all, a deep AdP-MERCOSUR integration is highly beneficial for the countries that are members of the AdP, although individually considered, the impact for each country is very heterogeneous.

In fact, based on the results obtained, a deep integration scenario AdP-MERCOSUR would mean an impact in terms of income growth of 4.4% for Costa Rica, followed by Peru with 3.2%, Colombia with 1.6%, Chile with 0.6% and Mexico with 0.4%. This means that the profit experienced by AdP countries with this Alliance is very superior to the one they would obtain with a mere AdP integration.

However, this positive impact in a deep integration scenario changes if the AdP-MERCOSUR trade integration is superficial, where the impact would only be significant for Costa Rica (2.4%) and Peru (0.7%).

Second, in case deep trade integration were to take place among all the countries of Latin America and the Caribbean, the profits for AdP member countries would be substantially higher than in the case of integration only at the AdP level or with MERCOSUR. Amongst AdP countries, Costa Rica (4.4%) would benefit most, followed by Peru (3.4%), Colombia (1.8%), Chile (0.7%) and Mexico (0.4%). In other words, all members of the AdP face their best scenario with Latin American integration.

Third, for the non AdP or MERCOSUR countries of Latin America and the Caribbean, regional integration would also have an important economic benefit and would allow these countries to increase their real per capita incomes by up to 2.2%.

Finally, although these two regional integration scenarios imply a considerable profit for AdP countries, the ones that would most benefit most would be the MERCOSUR countries. Both in a scenario of deep integration with the AdP and on a level of all of Latin America and the Caribbean, this bloc could experience an increase of its real incomes of up to 20%. The tremendous economic impact these kinds of regional integrations could have for MERCOSUR also provide important insight about the AdP's main political aim.

In fact, in light of these results it is possible to draw at least three main lines of action for the AdP: First, that its major challenge is a political one; second, that its main objectives surpass the frontiers of their members; and third, that this strategic alliance is more related to institutions than tariffs. Firstly, the AdP's political achievement is having incorporated five countries

"One political achievement of the AdP is that it accounts for the possibility of consolidating a flexible and pragmatic regional integration model that enables its members to keep making progress in parallel to their agenda of opening on a global level."

that, until now, have not belonged together to any bloc within the region. This consolidates a regional environment where, although the generation of blocs has led to fragmentation, the positive consequence is that it allows these blocs to dialogue as a group, given that all countries are at least part of one of them. By incorporating Mexico to this bloc, the AdP inserts it in a relationship with the rest of Latin America that had been evasive until now and it also strengthens the bloc by integrating one of the region's two great powers.

The other political achievement of the AdP is that it accounts for the possibility of consolidating a flexible and pragmatic regional integration model that enables its members to keep making progress in parallel to their agenda of opening on a global level. This is primarily divergent to the logic that MERCOSUR has operated until now.

Secondly, after positioning itself as one of the main blocs in the region, the objectives of the AdP transcend its five members. Because the AdP will not be able to generate a super-regional bloc by itself, the tasks of the AdP surpass the frontiers of current and future members. The reason is that, as the displayed results show, the AdP's effectiveness is not only established because it achieves deeper internal integration, but also because it paves the way for expanding regional integration.

Likewise, given the wave of regional mega deals currently under negotiation, the AdP may enable its members to face the new global balance of power as a bloc. That would be even more effective, if MERCOSUR and the rest of Latin America could be included into these efforts.

Since abolishing remaining tariffs is by no means sufficient to unlock substantial welfare gains, the central challenge for the AdP will be to initiate a deep institutional integration process that includes the reduction of non-tariff trade costs. This involves standardizing regulations and integrating institutions that facilitate procedures, avoid duplication and unnecessary red tape. The priority must be to synchronize rules of origin, as well as sanitary and phytosanitary regulations. Additionally, it will be necessary to work on the integration of administrative systems and procedure standardization. Along this line, the AdP will have to make progress in the integration of trade regulations, financial systems, services and investments.

In this sense, the consolidation of an agenda for a deep AdP integration will have a double effect. On the one hand, it will pave the way towards deeper integration within the AdP or at least towards a medium level of integration. On the other hand, and still more important, it will have a demonstrative effect for deep (or medium) integration, which could inspire deeper integration with MERCOSUR or the Central American and Caribbean bloc. Regarding the latter, the high complexity that achieving wider regional integration will have makes the experience of the Pacific Alliance all the more vital.

Finally, in the medium term, the region will face a strong change in global market conditions marked by the end of the commodities boom. This will generate lower economic growth rates, as one already starts observing. Moreover, the aforementioned global trade agreements that are currently under negotiation foretell strong changes in the intensity of international trade, as the results of this study confirm. And this can mean an eventual relocation of developed countries' industries and a reorientation of global demand towards China and its neighborhood, which could be detrimental to Latin America.

Therefore, effective regional integration must also necessarily raise the economies' productive potentials by better anchoring them in global value chains. This, in turn, means that the region must also strengthen its attractiveness as a destination for foreign direct investment. Latin America should jointly take up the challenge and think about granting the companies that wish to invest in the region rights at least equivalent to those they will obtain in other regions. The aim must be to strengthen the network of value chains among Latin American companies on a global level.

This requires a coordinated effort in improving the infrastructure network. The public sector must improve the precarious infrastructure that hampered trade between and within AdP countries. Clearly, this goes beyond the agenda of the AdP; still, it constitutes a necessary prerequisite for successful trade integration.

On a private level, regional companies must take the initiative to create production chains and intraregional trade for final and intermediate goods. This requires a vision of the private sector that anticipates the possible changes in the world trade order. Public investment targeted at facilitating the free flow of goods, services, capital and people is complementary to this.

The importance of the Pacific Alliance goes beyond an initiative to increase its members' economic conditions. As one of the founding fathers of the European Union, Robert Schuman, said in his famous speech on May 9th 1950, "Europe will not be made all at once or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity". Following this example, the Pacific Alliance can be one of many concrete steps that the long awaited regional integration in Southern America requires.

"The importance of the Pacific Alliance goes beyond an initiative to increase its members' economic conditions."

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APPENDIX

Table 13 Cross-section gravity estimates for manufacturing sector, 2007

	(1)	(2)	(3)	(4)	(5)	(6)
	Agriculture	Mining	Food	Textiles	Leather	Wood
Ln tariff	-2.861***	-20.066***	-3.140***	-4.342***	-5.046***	-5.684***
	(0.636)	(2.791)	(0.605)	(0.860)	(0.920)	(0.806)
Shallow FTA	1.442**	-0.975	-0.118	-0.321	-0.204	1.137*
	(0.458)	(0.793)	(0.532)	(0.533)	(0.650)	(0.536)
Deep FTA	0.689	4.292***	1.564*	2.357***	2.049*	0.473
	(0.630)	(1.087)	(0.712)	(0.7)	(0.831)	(0.707)
Ln distance	-0.781***	-1.129***	-1.277***	-1.188***	-1.067***	-1.319***
	(0.079)	(0.128)	(0.070)	(0.067)	(0.081)	(0.071)
Contiguity	1.248***	1.088***	0.779***	0.956***	1.114***	0.799***
	(0.164)	(0.234)	(0.160)	(0.167)	(0.185)	(0.164)
Common language	0.496***	0.23	0.697***	0.780***	0.748***	0.605***
	(0.100)	(0.161)	(0.093)	(0.089)	(0.103)	(0.093)
Ever colonial rel.	1.094***	1.519***	1.094***	0.910***	1.010***	0.918***
	(0.147)	(0.234)	(0.155)	(0.157)	(0.176)	(0.138)
Current colonial rel.	0.196	1.644***	-1.708	0.206	0.552	-0.3
	(0.271)	(0.497)	(2.179)	(1.923)	(2.177)	(2.408)
Ever same country	0.31	0.512	0.669**	0.284	0.823**	0.404
	(0.226)	(0.354)	(0.219)	(0.270)	(0.288)	(0.240)
Observations	7,938	5,228	8,032	8,547	6,738	7,336
R²	0.607	0.502	0.663	0.744	0.692	0.711

	(7)	(8)	(9)	(10)	(11)	(12)
	Paper	Petroleum	Chemicals	Minerals	Ferrous metals	Metal nec
Ln tariff	-4.848***	-9.538**	-11.210***	-8.872***	-10.456***	-10.756***
	(1.012)	(3.335)	(1.097)	(0.890)	(1.355)	(1.901)
Shallow FTA	0.826	-1.702	0.194	0.430	-0.137	1.706**
	(0.571)	(1.116)	(0.448)	(0.533)	(0.636)	(0.643)
Deep FTA	0.021	3.527*	1.055	0.287	2.245**	-0.831
	(0.762)	(1.432)	(0.622)	(0.692)	(0.845)	(0.818)
Ln distance	-1.836***	-2.216***	-1.437***	-1.592***	-1.398***	-1.525***
	(0.074)	(0.143)	(0.064)	(0.073)	(0.084)	(0.098)
Contiguity	0.370*	0.954***	0.792***	0.986***	0.927***	0.169
	(0.181)	(0.261)	(0.164)	(0.174)	(0.169)	(0.199)
Common language	1.150***	0.020	0.787***	0.728***	0.389**	0.487***
	(0.100)	(0.217)	(0.082)	(0.096)	(0.123)	(0.131)
Ever colonial rel.	0.787***	0.934***	0.456***	0.768***	0.742***	1.100***
	(0.159)	(0.280)	(0.127)	(0.149)	(0.176)	(0.171)
Current colonial rel.	-3.016	1.436	-0.276	-2.103	1.140	1.531
	(2.414)	(1.329)	(2.174)	(3.625)	(1.700)	(1.060)
Ever same country	0.535*	0.555	0.377	0.497	0.564*	-0.180
	(0.248)	(0.393)	(0.231)	(0.261)	(0.267)	(0.293)
Observations	7,684	4,101	9,027	7,094	5,816	5,498
R²	0.732	0.493	0.767	0.732	0.659	0.641

Table 13 cont'd

	(13)	(14)	(15)	(16)	(17)
	Metal prod.	Transp. equip	Electronics	Machinery nec	Manufactures nec
Ln tariff	-5.725***	-1.484	-4.321**	-7.186***	-3.867***
	(1.170)	(0.796)	(1.498)	(1.022)	(0.747)
Shallow FTA	0.059	2.210***	-0.921	0.328	0.526
	(0.559)	(0.608)	(0.617)	(0.483)	(0.571)
Deep FTA	0.859	-1.175	2.032*	0.550	-0.069
	(0.754)	(0.768)	(0.829)	(0.658)	(0.757)
Ln distance	-1.626***	-1.226***	-1.213***	-1.373***	-1.262***
	(0.066)	(0.080)	(0.071)	(0.063)	(0.067)
Contiguity	0.483**	0.757***	0.515**	0.618***	0.419*
	(0.164)	(0.175)	(0.190)	(0.169)	(0.163)
Common language	0.853***	0.579***	0.616***	0.749***	0.856***
	(0.092)	(0.105)	(0.094)	(0.078)	(0.087)
Ever colonial rel.	0.926***	0.632***	1.135***	0.813***	0.840***
	(0.149)	(0.165)	(0.177)	(0.137)	(0.158)
Current colonial rel.	-0.903	0.006	-0.483	0.334	0.536
	(2.191)	(1.172)	(3.096)	(2.344)	(2.245)
Ever same country	0.423	0.382	0.116	0.357	0.569*
	(0.245)	(0.275)	(0.316)	(0.242)	(0.236)
Observations	7,750	7,336	7,944	9,091	7,811
R²	0.746	0.707	0.757	0.808	0.742

Note: The table shows IV gravity estimates for manufacturing sectors with importer and exporter dummies (not shown) for a cross-section in 2007. Standard errors (in parentheses) are heteroskedasticity-robust. *, ** and *** indicate statistical significance at the 10, 5 and 1% level, respectively. FTA dummies instrumented with single contagion index a la Martin et al. (2012) or Baldwin and Jaimovich (2012), historical and recent war frequency and lagged average variables for political similarity (average of 2000–2005). The coefficient on the FTA dummy is the parameter estimate for delta/theta. The dummy for shallow and deep FTAs is classified with data on the depth of FTAs from Dür et al. (2014), which ranges from 0 to 7 and where the shallow FTA dummy switches to one for depth ≥ 0 , and the deep FTA dummy switches to one for depth ≥ 4 . I.e., the shallow dummy gives the effect of having an FTA, the deep dummy gives the additional effect of having a deep agreement. The trade data is from UN Comtrade, effectively applied tariffs stem from the WITS database, and gravity controls from the CEPII distance database.

Table 14 Cross-section gravity estimates for service sectors, 2007

	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Electricity	Gas	Water	Construc- tion	Trade services	Transport nec	Water transport
Shallow FTA	0.137**	0.025	0.086**	0.024	0.036	0.060	-0.028
	(0.048)	(0.056)	(0.030)	(0.061)	(0.038)	(0.031)	(0.056)
Deep FTA	0.192*	0.354***	0.250***	0.304***	0.452***	0.267***	0.479***
	(0.082)	(0.092)	(0.055)	(0.092)	(0.061)	(0.054)	(0.087)
Ln distance	-0.041	0.051	0.024	-0.031	-0.003	-0.008	0.061*
	(0.030)	(0.030)	(0.017)	(0.026)	(0.018)	(0.016)	(0.024)
Contiguity	2.070***	0.525***	0.507***	0.321***	0.426***	0.413***	0.468***
	(0.157)	(0.086)	(0.065)	(0.081)	(0.063)	(0.058)	(0.069)
Common language	-0.031	0.010	-0.038	0.044	-0.057*	-0.073***	-0.037
	(0.035)	(0.035)	(0.020)	(0.035)	(0.024)	(0.020)	(0.032)
Ever colonial rel.	0.389***	0.334***	0.366***	0.190**	0.405***	0.387***	0.256***
	(0.088)	(0.066)	(0.059)	(0.071)	(0.056)	(0.054)	(0.070)
Current colonial rel.	0.625	1.536	0.690	-0.108	0.900	0.713	0.320
	(0.940)	(0.836)	(0.928)	(1.185)	(1.018)	(0.870)	(1.087)
Ever same country	0.188	0.425**	0.193	0.062	0.123	0.159	0.175
	(0.233)	(0.158)	(0.111)	(0.126)	(0.105)	(0.093)	(0.118)
Observations	11,918	9,161	12,571	12,656	12,656	12,656	12,656
R²	0.972	0.964	0.965	0.907	0.959	0.96	0.919
RMSE	0.748	0.831	0.557	0.993	0.64	0.553	0.896

Table 14 cont'd

	(25)	(26)	(27)	(28)	(29)	(30)	(31)
	Air transport	Communication	Financial serv. nec	Insurance	Business serv.	Recreational serv.	Other Services
Shallow FTA	0.064	0.032	0.048	0.038	0.066	0.030	0.086*
	(0.039)	(0.027)	(0.039)	(0.031)	(0.036)	(0.033)	(0.035)
Deep FTA	-0.025	0.076	0.303***	0.136**	0.322***	0.192***	0.268***
	(0.059)	(0.046)	(0.064)	(0.052)	(0.056)	(0.054)	(0.059)
Ln distance	0.000	-0.007	-0.040*	0.006	-0.013	-0.025	-0.016
	(0.017)	(0.016)	(0.019)	(0.016)	(0.017)	(0.017)	(0.018)
Contiguity	0.337***	0.386***	0.297***	0.391***	0.325***	0.398***	0.371***
	(0.053)	(0.058)	(0.068)	(0.058)	(0.061)	(0.060)	(0.064)
Common language	-0.034	-0.024	-0.061*	-0.038	-0.044*	-0.029	-0.054*
	(0.021)	(0.018)	(0.025)	(0.020)	(0.022)	(0.021)	(0.023)
Ever colonial rel.	0.212***	0.237***	0.279***	0.178**	0.281***	0.272***	0.288***
	(0.041)	(0.050)	(0.070)	(0.056)	(0.050)	(0.053)	(0.060)
Current colonial rel.	1.325	1.045	0.698	1.629*	0.833	1.566**	0.641
	(1.111)	(1.014)	(0.893)	(0.697)	(1.178)	(0.589)	(0.995)
Ever same country	-0.001	0.089	0.200	0.223*	0.105	0.106	0.282**
	(0.079)	(0.091)	(0.117)	(0.100)	(0.099)	(0.099)	(0.105)
Observations	12,656	12,656	12,656	12,656	12,656	12,656	12,656
R²	0.957	0.967	0.955	0.964	0.966	0.962	0.943
RMSE	0.606	0.484	0.674	0.55	0.6	0.586	0.613

Note: The table shows IV gravity estimates for services sectors with importer and exporter fixed effects for a cross-section in 2007. Standard errors (in parentheses) are heteroskedasticity-robust and clustered at the country-pair level. *, ** and *** indicate statistical significance at the 10, 5 and 1% level, respectively. The coefficient on the FTA dummy is the parameter estimate for delta/theta. FTA dummies instrumented with a contagion index a la Martin et al. (2012) or Baldwin and Jaimovich (2012). The dummies for shallow and deep FTAs are classified with data on the depth of FTAs from Dür et al. (2014), which ranges from 0 to 7. The shallow FTA dummy switches to one for depth=0, and the deep FTA dummy switches to one for depth>=4. I.e., the shallow dummy gives the effect of having an FTA, the deep dummy gives the additional effect of having a deep agreement. ISIC sector 95 "Private Households with Employed Persons" not included in the estimations because there are no trade flows reported. The trade data is from GTAP 8.1, gravity covariates from the CEPII distance database.

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For more than a century, Latin America has struggled to build an economic regional integration space in order to accelerate convergence towards welfare conditions seen in developed nations. Shared heritage, culture and the endowment of vast natural resources seemed to assure fruitful economic and political cooperation. Paradoxically, the region has in many occasions fallen victim to centrifugal forces leading to ill-conceived economic policies, backwardness and war.

Regional economic integration has failed to produce the desired outcomes and has even often been the source of dissension. Now, after a decade of spectacular growth based on prudent macroeconomic policies and economic liberalization, Chile, Colombia, Costa Rica, Mexico and Peru have decided to work together to create an area where goods, services, capital and people can move freely within the alliance to create more welfare for their citizens and to enhance social and political stability within their nations. This is how the Pacific Alliance or Alianza del Pacífico (AdP) was born. This study aims at evaluating the gains from trade from the proposed trade integration between AdP countries.

The importance of the Pacific Alliance goes beyond an initiative to increase its members' economic conditions. As one of the founding fathers of the European Union, Robert Schuman, said in his famous speech on May 9th 1950, "Europe will not be made all at once or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity". Following this example, the Pacific Alliance can be one of many concrete steps that the long awaited regional integration in Southern America requires.