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China-US Economic War: Opportunities for the Andean Community
beyond the decoupling process¹

Daniel Agramont Lechín²

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² Associate fellow at the Peace Research Institute Frankfurt (HSFK).

ABSTRACT.

Following Xi Jinping's lead, China is heading towards a new modernization with the ambitious goal of becoming the leader in technological development. This has not gone unnoticed in the West, especially in the US. Tensions have increased, and a bilateral escalation is underway in what has already been dubbed as a return to great power competition. As a result, warnings are being voiced concerning a deepening of the deglobalization process, reinforced by an ongoing decoupling process between the two largest economies. This process is of special significance for the Andean Community, given that the contenders are its two largest trading partners. A first finding is that the Andean nations are far more dependent on trade with them than the other way around. This contradicts any notion that the Andean nations have a strong position in the world commodities trade. Nevertheless, several trade opportunities were found that stem from the trade tensions between China and the US. More importantly, it is shown that possibilities indeed exist to increase exports to both China and the US of non-traditional products over and above the usual commodity sales. Colombia has the largest opportunities in both destination markets, but one unexpected finding is that Ecuador has the second largest, with several such non-traditional products. Plus, Peru and Bolivia have several opportunities for diversification of exports to the US.

Keywords

Foreign Policy, Trade Wars, China, Latin America, US, Andean Region, Primary Dependence.

JEL Classifications

N26, F00, F05, F50, F59

1. INTRODUCTION

China's remarkable economic growth and its resulting rise in global importance are happening in a turbulent time for international relations. Emerging economies are acquiring more presence and power hand in hand with a decline in the power of contemporary leading nations. As Jacques was already arguing in 2009,

We are now witnessing a historic change which, though still relatively in its infancy, is destined to transform the world. The developed world – which for over a century has meant the West (namely, the United States, Canada, Western Europe, Australia and New Zealand) plus Japan – is rapidly being overhauled in terms of economic size by the developing world (Jacques, 2009: 7)

China's role is especially important in this context (Merino, 2016). Following Xi Jinping's lead, China is heading into a new modernization, a national rejuvenation, with the ambition to become not only the world's largest economy, but also the leader in technological development. This has not gone unnoticed in the West, especially in the US. After more than four decades, China's government decided in 2017 to drastically change course from engagement to containment. The specific policies were first aimed at reducing trade flows, but as tensions have increased, a bilateral escalation is underway in what is already being dubbed a return to great power competition (Dussel-Peters, 2022; Colby & Mitchell, 2020; Blankenship & Denison, 2019). The 2020 change of government in the US has not diverted China's new course. As a result, the former mainstream optimism about the deepening of liberal globalization, as demonstrated in this paper, has given way to growing warnings concerning the deepening of a deglobalization process, reinforced by an ongoing decoupling process between the two largest economies (Javorcik, 2020; McKinsey, 2020; Witt, et al., 2021; Lincicome, 2022).

In this setting, the question arises, how will the foregoing impact the peripheries? Following Branko Milanović (2021), the main argument is that the economic tensions between the world's largest economies provide developing countries an opportunity to improve their participation in the global economy. Specifically, the expanding importance of reshoring and regional value chains around the West can translate into an increase in the exportation of added-value goods from elsewhere (Agramont, 2021). As detailed below, the escalating struggle between China and the US is already affecting their bilateral flows, and this situation is not expected to change. In fact, the World Economic Forum recommends “that companies should aggressively evaluate near-shore options to shorten supply chains” (Williamson, 2021: 29). Despite the repercussions that this will have on employment and prices, economic decoupling is argued to hold potential benefits for developing countries, in that it disrupts the efficiency-driven view of global value chains. Instead, global production and consumption are expected to be more and more shaped by other factors that are related to geopolitics.

For Latin America and the Caribbean (LAC) this topic is of special importance; as García & Mendez (2021: 410-411) explain,

LAC needs to find a path to development that can prevent its peoples falling farther behind the rest of the developing world. Seismic world events – the decoupling of the US and China and the COVID-19 pandemic's acceleration of the digitalization of business – have opened up a window of opportunity for Latin America to unseat some Asian countries as the USA's main suppliers by 'nearshoring' some economic activity.

Some sectors are unlikely to be re-/nearshored anytime soon; for example, Asian suppliers of electronics are entrenched by vast economies of scale and the prohibitive costs of duplication elsewhere. But two thirds of automotive firms are planning to nearshore, and in the consumer and packaged goods sector they are moving to simplify product portfolios and regionalize supply chains. And construction and engineering firms are resorting to dual sourcing to reduce supply disruption exposure.

Given the foregoing, this paper has a twofold objective. First, it seeks to thoroughly describe the Andean Community's trade relations with both China and the US. On this basis, it seeks to examine the export opportunities that derive from the decreasing trade flows between China and the US. The importance of this discussion for the Andean countries derives not only from the tensions between the two powers and the decoupling process, but also from the fact that they both already constitute the Andean countries' main trading partners. Despite the leading position of the US until the current century began, in just the two decades since then, the trade flows from China have positioned it as the largest buyer and seller of goods of many Andean countries as well as a key provider of capital and cooperation. From a commercial perspective, China is the primary destination market for exports from Peru (28% of the total), and the secondary one for Ecuador (16%) and Colombia (8%), while the US is the primary market for exports from Colombia (30%) and Ecuador (23%), and the secondary for Peru (16%) and Chile (13%). The case of Bolivia is different: China and the US rank in the sixth and seventh position, respectively, with roughly 5% each, due to Bolivia's huge natural gas exports to Argentina and Brazil. Respecting imports, China is the key provider of goods to Peru (with 28% of the total), Chile (27%), and Bolivia (22%), while the US is first to Colombia (24%) and Ecuador (22%).

This paper is structured in three sections, excepting the introduction. The first section is an in-depth review of the productive base of the Andean Community (CAN in its Spanish acronym), carried out to understand the main characteristics of its trading relations with China and the US. The Andean region is known for its rich soil, and its trade concentrates on raw materials. Given that this section is intended to provide specific details, the point of departure will be to highlight the large differences among CAN nations —both in size and technological advance. As the methodology aims to unearth

opportunities for the CAN to increase its exports of added-value goods to both contending world powers, the analysis will focus on existing capabilities. Contemporary Andean exports will accordingly be analysed in-depth and compared to the trade flows of the same goods between China and the US. An opportunity may be said to have been found if a significant value imported by one from the other is identified as a product that any Andean country currently exports. A separate opportunity analysis will then be performed for China and the US using data from the UN-Comtrade repository at a four-digit harmonized system, which also provides the possibility of comparing both.

2. GREAT POWER COMPETITION

China's growth miracle, as some call it (Huang, 2008; Wei et al., 2017; Kroeber, 2020), refers to the almost double-digit mean of the growth rate China has enjoyed since the Deng Xiaoping reforms were implemented in the late 1970s. The key driver of these remarkable growth rates was an industrialization process (Jenkins, 2018) that in just a few years attracted considerable foreign direct investment (FDI) from the West to China (Balaz et al., 2020) beginning from trade flows that were roughly 1% of the world total (Brandt, Ma & Rawski, 2016). By 2018 "it produced more than a quarter of the world's manufactured goods by value and was the world's biggest exporter, accounting to 18% of the export of manufactures" (Kroeber, 2020: 67). China thus became known as the workshop of the world, "describing not only the sheer volume of its cross-border trade, but also the breadth of its sector coverage" (Wei et al., 2017: 54). Consequently, China supplanted the US as the industrial hub of the global economy, with a leading advantage in global trade networks, commodity markets, and the energy sector (Vadell, 2014). A reverse process has characterized the West. As the US and some European nations have turned to other value-generating activities, many nations in Asia, China above all, have benefited from being able to expand their industrial production. China's accession to the WTO in 2001 increased its appeal to foreign capital and FDI even more (Slipak & Ghiotto, 2019).

Aware of the huge challenges facing its economy and endeavouring to avoid the middle income trap (Koebler, 2020; Inkster, 2020), the Chinese government approved several plans that mark a clear change in direction. Also dubbed the third revolution (Economy, 2018), Xi's ambitious plan deepens the 2009 announcement of a policy to pursue independence from Western capital and technology. As McGregor (2010: 3) affirms, this plan, centred on the concept of indigenous innovation, will be "employing China's fast-growing domestic market and powerful regulatory regime to decrease reliance on foreign technology and develop indigenous technologies that will enable China to solve its massive environmental, infrastructure and social problems, and as a result, enhance both its economy and national security".

To this end, Xi's administration approved and implemented several gradual and specific plans (Fornes & Mendez, 2018). The general indications for this economic policy can be found in The Decision that emerged from the Third Plenum of the 18th Party Congress. Subsequently, in 2015 the government published the famous Made in China 2025 plan, which foregrounded the goal of making China a leader in ten high-tech sectors in order to downscale its dependence on foreign technology (Stallings, 2020). The importance of this plan cannot be overstated. According to Conrad et al (2016: 1) "China has launched a high-tech revolution." The plan provides that the government will actively participate in undertaking to transform China into a high-tech production hub. Supplementing this plan, the government announced another plan called China Standards 2035 "to set standards in the country's favour, positioning it to further dominate the market as associated technologies evolve" (Dua Jr., 2020: 1). Developing the most advanced technology is China's mission, but technological supremacy countervailing Western dominance cannot be achieved without also setting world standards.

Notwithstanding the foregoing, these plans and objectives had to be reframed by China in light of the increasing tensions with the US. Xi's ambitious pursuit of technological supremacy was based on the assumption of peaceful coexistence with the West while expanding economic ties in an interconnected global economy. But the rising tensions have rendered a scenario of peace and integration no longer valid. Thus, in order to truly meet the challenges China faces in the pursuit of its objectives for the Global South, the sharp turn occurring in the US foreign policy must be taken into account. In 2017, during the publication of its National Security Strategy, President Trump unambiguously declared that "for the first time, American strategy recognizes that economic security is national security" (Barber & Sevastopulo, 2017). With this statement, the US changed its approach to China under the label of *strategic competitor*, which meant that its China policy would be informed by both economic and security concerns (US Chamber of Commerce, 2021). In contrast to a certain optimism in politicians across the world regarding a de-escalation of tensions after the change of US administration, the national-security advisors Campbell & Sullivan (2019: 2) argue that, although "Washington remains bitterly divided on most issues, there is a growing consensus that the era of engagement with China has come to an unceremonious close". This fulfils the theoretical predictions of a contested international leadership transition from a declining hegemon, the US, and a rising one, China (Dominguez, 2020). Instead of a break, Xuetong (2021) comments that "Biden's policies to date are in many ways a continuation of his predecessor's confrontational approach. As a result, U.S.-Chinese relations are unlikely to grow any less tense or competitive than they have been in recent years." According to authors such as Wang Jisi (2021: 1) "the United States and China are embroiled in a contest that might prove more enduring, more wide-ranging, and more intense than any other international competition in modern history, including the Cold War."

This assertive policy leading to increased competition represents Xi's single most important challenge in his quest to restore economic growth (Kroeber, 2020). The engagement policy that the US had chosen for its relations with China ever since the famous Kissinger-Nixon policy of opening (Campbell & Ratner, 2018) allowed China to benefit from liberal globalization, not only by receiving large capital investments from Western companies, but also by establishing strong partnerships in Africa and Latin America without implying strategic competition with the West. Now, however, even if they are not heading towards a redux of classic military, Cold war logic (Jacques, 2021; Christensen, 2021), China and the US are locked in an economic confrontation that started with the imposition of barriers to trade—which was quickly labelled a trade war resembling the period of the 1930s financial crisis. In early 2018 then-President Trump made several announcements signalling that the US would be modifying its trade policy and various measures were adopted in order to provide protection to its national production. One of the pillars of Trump's protectionist plan was the imposition of tariffs on China on the grounds that China's exports harmed US domestic production. Of course, as expected, this was answered by a strong reaction from the Chinese government. As Bown (2021: 1) sums up, the trade war between China and the US

proceeded in five stages between 2018 and 2021. The first six months of 2018 featured only a moderate increase in tariffs. The months of July through September 2018 resulted in a sharp tariff increase on both sides: US average tariffs increased from 3.8 percent to 12.0 percent, and China's average tariffs increased from 7.2 percent to 18.3 percent. In stage three, there was an 8-month period (September 25, 2018, through June 2019) of little change in tariffs. From June to September 2019, another set of tariff increases kicked in. In the current stage five, and despite the phase one agreement, tariffs between the two countries remain elevated and are the new normal.

The specific products targeted by each country can be found in Annexe 4. They are competing products, mostly medium and high-tech manufacturers. The US is mostly targeting electronics, machinery, optical instruments, vehicles, and aluminium goods from China. China's tariffs target mostly oilseeds, vehicles, plastics, mineral fuels, cereals, and several other manufactures and edible goods. According to the Peterson Institute for International Trade, "average US tariffs on imports from China remain elevated at 19.3 percent. These tariffs are more than six times higher than before the trade war began in 2018. These tariffs cover 66.4 percent of Chinese exports to the United States". In turn, "Average Chinese tariffs on imports from the United States also remain elevated at an average of 20.7 percent. China's retaliatory tariffs continue to cover 58.3 percent of US exports to China" (Bown, 2022).

The dispute has quickly turned into a confrontation over prospective economic supremacy and, heavily driven by technological advances (Dussel-Petters, 2020), is labelled a *Technological war* (Sun, 2019; Chang, 2020). While the first area of intervention was international trade, progressively the policies both nations began to implement were directed towards a broader plan to secure a leading edge in the future of technological development. A series of restrictive measures on business with China was implemented by the US,³ in “a strategy to thwart China’s rise. Framed as *economic decoupling*, this has featured a trade war to force global supply chains to relocate out of China and a tech war to choke off the flow of critical technologies and know-how to China” (Mixin Pei, 2021: 1). As Stew Magnuson (2020) notes, “the term Tech War may one day describe the age we are living in as the Cold War did after World War II”. China, a global technology power is challenging the United States for supremacy (Schüller & Schüler-Zhou, 2020: 1); therefore, the struggle for technological leadership is a struggle for future hegemony (Khana, 2019; Lee, 2018; Webb, 2019). As Mixin Pei (2021: 1) unmistakably sums up, “in its essence, the United States-China strategic competition is less a confrontation between duelling ideologies than a familiar clash between a hegemonic power and its challenger.”

This technological confrontation is expected to gain political prominence in both countries and will definitely shape their foreign policies (Blanchet, 2021). Ever since the twenty-first century began, China has been approving plans aimed at reaching the leading position in technological innovation, motivated since 2017 by the US response, whose “restrictions on technology transfers have put Chinese companies under huge pressure” (Schüller & Schüler-Zhou, 2020: 2). These protectionist policies are being labelled techno-nationalism since they are “a new strain of mercantilist thought that links tech innovation directly to economic prosperity, social stability and to the national security policies of a nation. In this regard, government intervention in markets is considered justified to ensure protection against opportunistic or hostile state and non-state actors. Techno-nationalism seeks to attain competitive advantage for its own stakeholders, on a global scale, in order to leverage this advantage for geopolitical gain” (Capri, 2020: 2). Technological decoupling might be a more accurate term according to several pundits to describe the key courses of action to be followed in the forthcoming hegemonic struggle, as it refers to policies applied by both the US and China to produce technology of their own which can give them the lead in economic and military power in the coming decades. While this is valid for the armed services and heavy and light industry, it is mainly intended for high-tech innovators and new sources of value, such as the “data economy” and “digital economy” (Actis & Creus, 2021).

³“Examples have included a more restrictive approach to foreign acquisitions of U.S. firms due to security concerns (Foreign Investment Risk Review Modernization Act of 2018); the expanded use of export controls to prevent transfers of sensitive technologies (Export Control Reform Act of 2018 (ECRA)); the extraordinary imposition of tariffs under Section 301 and other trade policy authorities; the exclusion of students and researchers with military affiliations; and the closure of a consulate and expulsion of journalists tied to concerns over economic espionage, state control over the Chinese media, and reciprocity” (US Chamber of Commerce, 2021: 6).

A corollary question thus arises, How does the foregoing bear on actual trade flows? It cannot be presumed that decoupling rhetoric will be accepted and implemented by private companies. While the aggressive discourse continues, few specific policies have been implemented so far. Public statements by Western businessmen have made clear that decoupling from China is a conflictive issue due to the investments of billions made already. Among scholars a divergence has arisen (just as in the prior debate on globalization) over the severity and magnitude of the deglobalization process, understood as “the process of weakening of interdependence between nations” (Witt, 2019: 1054). On the one hand, authors like Williamson (2021: 29) affirm that “predictions grossly exaggerate the extent to which such restructuring will happen in practice”. Thus, according to Olivé & García (2020), Price (2019), Crivelli & Cabrera (2020), or Puello-Socarrás (2020), it would be more accurate to talk about a deceleration, rather than a reversal of globalization. On the other hand, other authors like García & Mendez (2021), Stieglitz, (2022), Javorcik (2020), Witt et al. (2021), Dominguez (2020), and Lincicome (2022) affirm that relocation, deglobalization, and decoupling are snowballing phenomena that will continue to intensify as companies engage in relocalization and reshoring to protect themselves from supply chain risk. As Rodrick (2022) affirms, not the end of globalization per se, but of the hyper-globalization that emerged in the past decades; giving way to a growing regional engagement. Some quantitative projections like McKinsey’s estimate that reshoring in all its diverse forms could reach 16-26 percent of total global trade worth US\$2.9-\$4.6 trillion (Lund et al. 2020). By observing the evolution of economic flows in recent years, it can be affirmed that there has indeed been a sharp decrease. Dominguez & Vadell (2020) affirm this retreat of globalization is not a recent phenomenon, and that by 2016 the decrease in international trade and investment flows was already important. The election of Trump in the US and the turn to protectionism just deepened the case. “Between July 2018 and September 2019, the US slapped tariffs of up to 25% on almost all imports from China. The tariffs have had a profound impact. Before the dispute began, 23% of all US imports came from China – more than \$526 billion in 2017 alone, and roughly as much as neighbouring Canada and Mexico combined. At the end of 2019, that was down to 18% – a decrease of more than \$26 billion” (Deutsche Welle, 2021). It comes as no surprise then that the “latest Reshoring Index indicates US imports of Chinese manufactures declined 17 per cent in 2019 (US \$90 billion), while imports from Mexico rose US\$13 billion” (García & Mendez, 2021: 410-411)

Additionally, the largest impact was observed on investments. An overall 75% decrease in FDI flows—from US\$62 billion in 2016 to US\$15.9 billion in 2020— between the US and China has been observed, the lowest since 2009, but this was also due to the COVID-19 pandemic. The high-tech sector deserves special attention, as it is the one undergoing the harshest effects of the decoupling rhetoric, and where it is really taking hold. From the beginning, aside from the threats, some of the concrete public policies implemented were specifically aimed at digital services and high-tech products, resulting in a sharp decrease of 96% in technology-related FDI from 2016 to 2020 (Zhou, 2021).

Finally, current global events do not give positive signals about a return to prior globalization trends. As Lincicome (2022) affirms,

The stubbornly persistent pandemic, events in Ukraine, and simmering U.S.-China tensions have led numerous commentators—and not just the usual skeptics—to boldly proclaim that we’re entering a new era of “deglobalization”. Factories are reshoring, economies are decoupling, and everyone has given up on “free trade.”

3. TRADE RELATIONS WITH THE TWO CONTENDING HEGEMONS

3.1. Andean Community Productive Structure

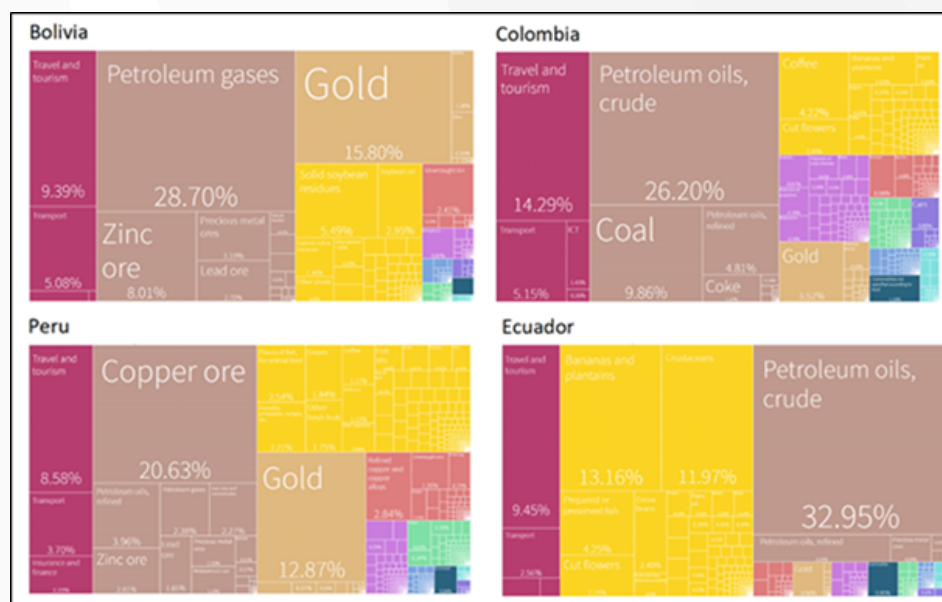
In the specific case of Andean countries, industrial production is scarce and results in exports highly skewed towards raw materials, agricultural goods, and low-tech manufacturing. This is better explained by an innovative methodology for calculating the industrial development of countries that has gained prominence in the past decade: the concept of Economic Complexity, as developed by Hausmann & Rodriguez (2009). According to their Atlas⁴,

The economic complexity of a country is calculated based on the diversity of exports a country produces and their ubiquity, or the number of the countries able to produce them (and those countries’ complexity). Countries that are able to sustain a diverse range of productive know-how, including sophisticated, unique know-how, are found to be able to produce a wide diversity of goods, including complex products that few other countries can make. So, ... the main characteristic of the Andean countries is the lack of complex activities, a.k.a. low added-value goods.

Following this methodology, it is argued that all four Andean nations export products mostly from the least complex categories, products that did not undergo a transformation process and consequently have lower added value (see Figure 1). As observed in the Figure below, Bolivia, Colombia, and Ecuador depend more on hydrocarbons (section 27 HS), while Peru depends on minerals (section 26 HS). Minerals and agriculture are highly significant for all five Andean countries. Services (in pink) are not only small in proportion, but also highly concentrated in travel, tourism, and transportation. Several products do not belong to the commodity categories and are presented in the purple, green, and blue boxes; however, as is accurately shown below, the proportion is really small.

⁴<https://atlas.cid.harvard.edu/glossary>

FIGURE 1: CAN EXPORTS, ACCORDING TO COUNTRY, BASED ON THE ECONOMIC COMPLEXITY METHODOLOGY



Source: *The economic complexity Atlas*

The foregoing does not imply that the four Andean nations are homogenous. The first difference is in size. In 1969, when the Pacto Andino [Andean Pact] was signed in Cartagena, Colombia's GDP represented 38% of the total, while Peru, Ecuador and Bolivia represented 38%, 18% and 5%, respectively.⁵ This divergence has deepened and, in 2020, Colombia's GDP represented 45% of CAN's total GDP, Peru's 33%, Ecuador's 16%, and Bolivia's barely 6%. The second difference is in industrial and technological capabilities. All these nations have aggressively pursued industrialization beginning in the 1950s, first through an import-substitution model, then through market liberalization, but the outcomes in reality vary greatly. Though it goes beyond the scope of this paper, the important fact is that a huge disparity now exists in their productive capabilities, both in quantity and diversification.⁶ Hence, although the exports of all four countries are mostly hydrocarbons and minerals, followed by agricultural goods, there are some specific characteristics in their trade with both China and the US that are noteworthy, and will be explained in detail in the next section. While Colombia and Peru have developed some medium- and low-tech manufacturing and have managed to diversify their exports to a certain extent, Ecuador and Bolivia find themselves trapped in an extreme primary dependency.

3.2. A typical centre-periphery relation

The Andean region is known for its soil, which is rich in hydrocarbons and houses a diversity of minerals. Given that extractive dependence is a structural and historic feature of the region dating back to even before independence from Spanish colonization, it comes as no surprise that relations with China and the US follow the same pattern.

⁵GDP in current US\$. Data from data.worldbank.org

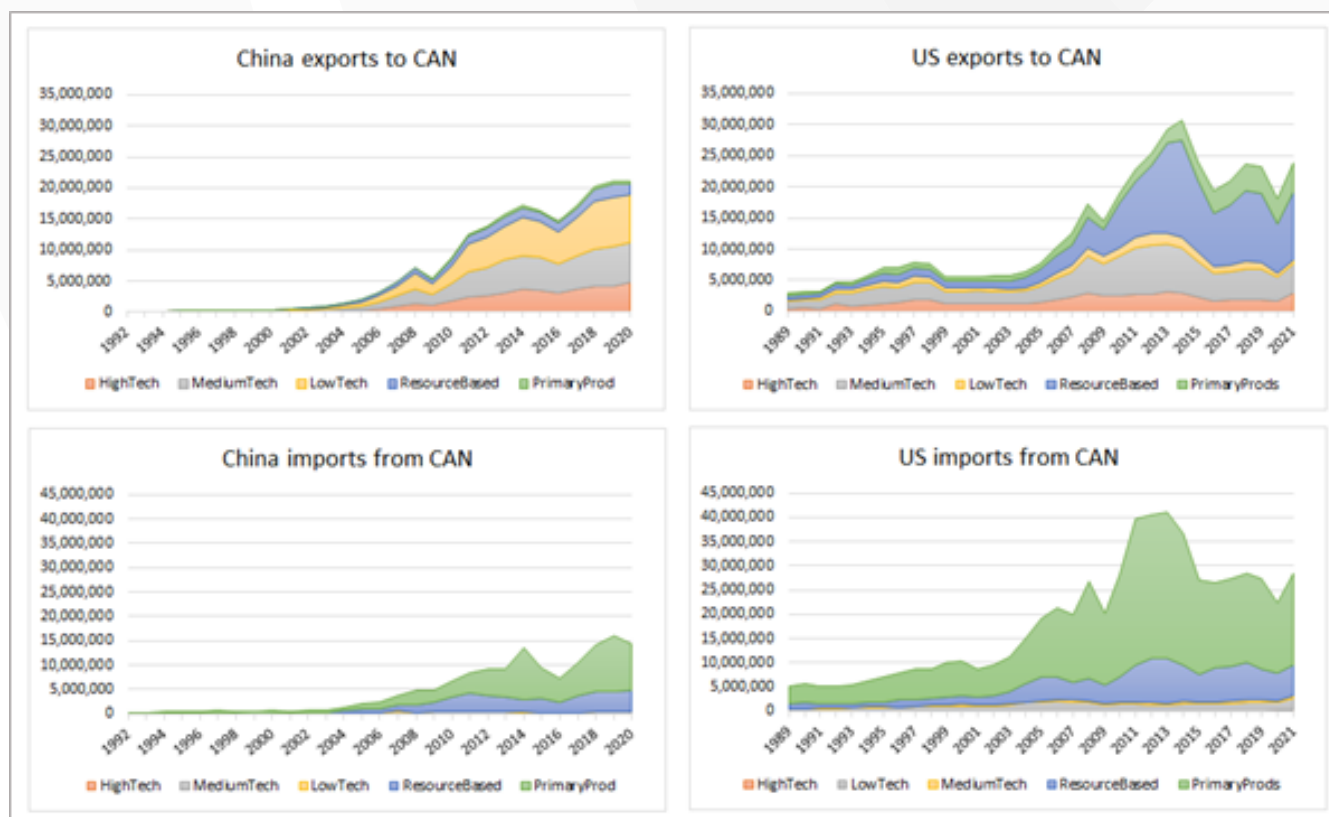
⁶A brief review of the different development models applied in Latin America can be found in Calix (2016).

As this section will demonstrate, commercial relations with both world powers replicate the typical centre-periphery model. The main argument in support of this claim is that exchange is highly unequal. First, while China and the US are the first or second trading partner of all four CAN nations, the⁵Andean market represents barely 1% of their total trade. Specifically, the US is recipient of 22% of total CAN exports (US\$25 billion), while China receives 18% (US\$21 billion) (see Annexe 1).

The second supporting argument is that, although the commodity price boom and the increasing demand for raw materials caused a huge increase in Andean exports after 2003, this was also accompanied by a large increase in imports as well. As a result, the balance of trade with both powers has been notably disparate (see Annexe 2). Aggregate data for the Andean Community show that after more than a decade of surplus, the balance with the US turned negative in 2014 and this has been the trend since 2018. In turn, the balance with China, after several years of reported deficit, has turned positive in the past three years. However, if regard is had to the individual cases of the four Andean countries, the balance with the US has been mostly positive for Colombia, Ecuador, and Bolivia for the past 20 years, whereas these same countries have a predominantly negative balance with China. Peru, by contrast, has a positive trade balance with China and a negative one with the US.

The third argument is that exports of CAN to both nations consist mostly of primary products with low added-value, while imports comprise mostly manufactures of diverse technological content. As illustrated in Figure 2, if the analysis of the technological content of trade flows is deepened, several conclusions emerge. On the one hand, one can clearly see that China has become the main industrial provider to the region. While the US sells larger volumes, these are mostly resource-based manufactures and a smaller portion of medium-tech goods. China, in turn, sells a larger volume of low-, medium- and high-tech goods. On the other hand, consistent with the centre-periphery model, CAN exports to both nations consist almost exclusively of primary goods and resource-based manufactures, that is, there are barely any industrial exports from CAN to China or the US. It is true that CAN nations hardly produce any high-tech goods, yet production of medium- and low-tech goods is growing, mainly in Colombia and in Peru to a lesser degree, which are exported, in a small but growing proportion, to the US but not to China. In concrete terms, primary goods represented 68% of China's total imports from CAN on average from 1992 to 2020. The rest of the imports came from resource-based manufactures, at 29% on average for the same period. As is clear, only 3% of imports from CAN belonged to value-added industrial goods categories. Nevertheless, it should be noted that, while almost 99% of China's imports from the region consisted of primary products in 1992, a diversification has been recorded, and resource-based manufacture imports are growing. Similarly, analysing trade with the US, imports recorded over the whole analysis period mostly consisted of primary goods, at 69% in average, with resource-based manufactures at 20%. Low-tech manufactures record a significant 9%.

FIGURE 2: CAN TRADE WITH CHINA AND THE US, IMPORTS AND EXPORTS, ACCORDING TO TECHNOLOGICAL CONTENT AND VALUE, IN THOUSANDS OF US\$, 1989-2021



Source: author's own calculations with data from UN-Comtrade

An assessment of the products that are traded the most (4-digit level of the Harmonized System) provides more insights into the specific dynamics. It is a known fact that both the US and China buy large quantities of natural resources from around the globe to fuel their industries. In the case of CAN, however, there is a significant difference that must not be missed. As the data in Table 1 shows, the US import structure from Andean countries is more diversified than China, with a range of agricultural and food products. In turn, these US purchases are also among the most important Andean exports—flowers, coffee, bananas. In contrast, China's top 10 largest purchases are predominantly oil, a vast array of minerals, and only two non-extractive goods: fresh or processed fish.

Table 1 presents the degrees of dependence of CAN on each of the powers. Specifically, the fifth and sixth columns give insights into whether the US or China are dependent on the import of any particular CAN good or if, instead, it is CAN which is dependent on its export. For each product, the

percentage shows the share that the specific flow bears to the total share. The main conclusion is that, for most products, Andean nations are the ones with a higher dependence. For products like oil, flowers, coffee, strawberries, and grapes, the US is the recipient of more than 40% of Andean exports (see column 5). In turn, column six shows that US imports are more diversified and rely less on Andean exports. Nevertheless, two imports, grapes and coffee, record moderate dependence, for around 20% of total imports from CAN. There is one product on which US dependence is extreme, reaching 97% of its total imports, namely, flowers. In the case of China, the main finding is that Andean countries are largely dependent on exports to China, that is, the Chinese market represents a very high share of the top products that the CAN sells. Specifically, 95% of its iron ore, 73% of its ferro-alloys, 73% of its fish flour, 68% of its copper concentrate, and 55% of its refined copper go to China. In contrast, there is only one product on which China is dependent, namely, fish flour, at 73%. Zinc is worthy of mention as, despite representing only 25% of China's imported total, it is a highly relevant good for its industries.

TABLE 1: TOP 10 LARGEST CAN EXPORTS TO THE US AND CHINA, 4-DIGIT LEVEL HS, ACCORDING TO VALUE, IN THOUSAND US\$, AVERAGE 2016-2020

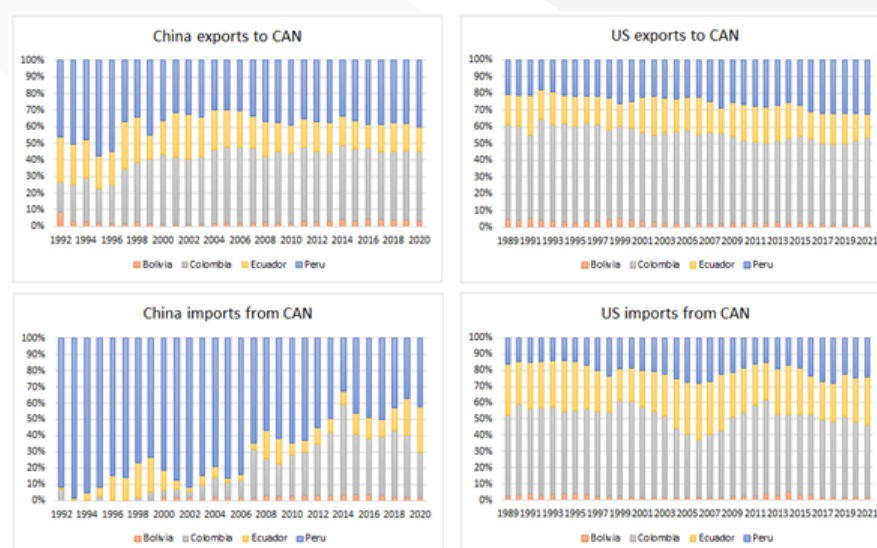
US	Product	CAN to US (thousand US\$)	%	CAN dependence on US	US dependence on CAN
Code	All products	25,004,270		22%	1%
2709	Petroleum oils, crude	8,746,278	35%	42%	7%
2710	Petroleum oils (excluding crude)	2,717,341	11%	44%	4%
0603	Cut flowers and flower buds, fresh	1,559,049	6%	66%	97%
0901	Coffee, roasted or unroasted	1,228,276	5%	41%	21%
7108	Gold, unwrought or not	1,020,953	4%	10%	11%
0803	Bananas, fresh or dried	668,573	3%	15%	24%
0306	Crustaceans, fresh, chilled, frozen	616,519	2%	15%	8%
0810	Fresh strawberries, raspberries, blackberries	498,594	2%	48%	13%
0806	Grapes, fresh or dried	351,729	1%	43%	19%
0804	Dates, figs, pineapples, avocados, mangoes	338,108	1%	28%	8%
China	Product	CAN to China (thousand US\$)	%	CAN dependence on China	China dependence on CAN
Code	All products	21,024,508		18%	1%
2603	Copper ores and concentrates	8,089,586	38%	68%	24%
2709	Petroleum oils, crude	4,191,541	20%	20%	2%
0306	Crustaceans, fresh, chilled, frozen	2,120,334	10%	51%	30%
2301	Flours, meals and pellets, of fish	1,130,590	5%	72%	51%
7403	Copper, refined, and alloys,	929,941	4%	58%	4%
2601	Iron ores and concentrates	917,158	4%	95%	1%
2616	Precious-metal ores and concentrates	675,066	3%	55%	17%
2608	Zinc ores and concentrates	643,254	3%	22%	25%
2607	Lead ores and concentrates	407,907	2%	38%	19%
7202	Ferro-alloys	398,345	2%	73%	5%

Source: author's own calculations with data from UN-Comtrade

3.3. Country-case analysis

As noted above, an important fact to consider when analysing CAN is that the huge disparities in the size of the economies have a direct correlation with trade flows. Hence, while aggregate data about CAN provide a broad picture, a specific analysis of the four Andean nations allows some important conclusions to be reached (see Figure 3). Colombia has both the largest export and largest import trade with the US, reaching 53% and 50% of its total on average since 1989. Peru ranks second, with 25%, and Ecuador third, with 19%, on average from 1992 to 2020. Bolivia's trade is minimal, reaching 3% of its total on average over the same period. As for China, it is noteworthy that Peru is its oldest trading partner in Latin America; accordingly, until 2006 imports from Peru accounted for 86% of China's total imports from CAN. After that year, Peru's relative share decreased, due to the rise of imports from the other countries, yet it has never shared less than 47% of China's total. Colombia is the country that has increased its exports to China the most, reaching 56% of its total in 2014, averaging 36% after that year. Regarding China's exports to CAN, Peru was its main recipient until 1996 but after that year Peru slowly lost ground to Colombia, which reached 42% of the CAN total on average in 2004. Ecuador shares 10% of China's imports from the region and Bolivia 2%.

FIGURE 3: CAN TRADE WITH CHINA (1992-2020) AND THE US (1989-2021), IMPORTS AND EXPORTS, BY COUNTRY, ACCORDING TO VALUE, IN PERCENTAGE,



Source: author's own calculations with data from UN-Comtrade

Deepening the analysis of the specific products that each Andean country exports, while the main conclusions from the preceding section are unchanged, certain details are worthy of note.⁷ First, as far as China is concerned (see Table 2), Bolivia and Peru mainly sell minerals (Chapter 26), Colombia's exports are mostly petroleum (Chapter 27) and Ecuador's fish and crustaceans (Chapter 30). The concentration on the aforementioned sectors is remarkably high in all four countries,

⁷ In order to provide more robust results, data of trade flows in Table 3, Table 4 and Table 5 is an average of the years 2016 and 2020.

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accounting for more than two thirds of total exports to China. Besides these products, small quantities of other basic goods are sold to China, like coffee from Colombia, fruits from Ecuador and Peru, or meat from Bolivia. And, as the fifth and sixth column below show, the Andean nations are largely dependent on the Chinese market yet share just 1% of China's total imports in most cases. The only exceptions are Peru's export of ores and slag (chapter 26) which have 25.5% of China's market; and to a lesser degree Ecuador's exports of fish and crustaceans (chapter 3) which account 11.8% of China's imports of these products. For total exports, Table 2 also shows that Peru is the one that depends the most on the Chinese market, at 28% of its total exports. China is a less important destination for the exports of Ecuador (12%), Colombia (10%), and Bolivia (5%).

TABLE 2: CAN EXPORTS TO CHINA, PER EXPORTING COUNTRY, 2-DIGIT LEVEL HS, IN THOUSANDS OF DOLLARS, AVERAGE OF 2016-2020

China	Product	Exports US\$ in thousands	%	Andean depend.	China depend.
Bolivia	All products	472,987		5%	0.02%
26	Ores, slag and ash	365,215	77%	18%	0.21%
2	Meat and edible meat offal	51,259	11%	87%	0.21%
44	Wood and articles of wood	19,650	4%	31%	0.09%
74	Copper and articles	8,047	2%	43%	0.02%
25	Salt; sulphur; earths	9,949	2%	16%	0.13%
Colombia	All products	3,661,052		10%	0.18%
27	Mineral fuels, oils	3,149,816	86%	16%	0.99%
72	Iron and steel	322,136	9%	56%	1.17%
26	Ores, slag and ash	42,991	1%	65%	0.03%
9	Coffee, tea, mate	20,353	1%	1%	2.16%
Ecuador	All products	2532512.67		12%	0.12%
3	Fish and crustaceans, molluscs	1553665	61%	39%	11.83%
27	Mineral fuels, oils	372309.667	15%	5%	0.12%
44	Wood and articles of wood	219492.333	9%	39%	0.98%
26	Ores, slag and ash	123964	5%	47%	0.08%
8	Edible fruit and nuts	169258.333	7%	5%	1.57%
23	Residues and waste from the food industries	30514.6667	1%	22%	0.73%
Peru	All products	12429990.7		28%	0.60%
26	Ores, slag and ash	9529433.33	77%	60%	5.96%
74	Copper and articles	1124165.67	9%	51%	2.46%
23	Residues from food industries	1082712.67	9%	66%	25.83%
8	Edible fruit and nuts;	137097	1%	4%	1.27%

Source: author's own calculations with data from UN-Comtrade

Regarding the US (see Table 3), the first thing to notice is the different composition of trade as compared to China. Specifically, aside from petroleum and agricultural goods, the US buys several added-value goods like precious stones and jewellery from Bolivia, Ecuador, and Peru; e.g., refined tin from Bolivia, wood articles from Ecuador, refined aluminium from Colombia, and apparel and clothing from Peru. By analysing the fifth and sixth columns, one can clearly see that for several products, the Andean nations have a large dependency on the US market. The most notable are flowers (79%) and aluminium (77%) from Colombia, precious stones (69%) from Ecuador, apparel (69%) and vegetables (56%) from Peru, and tin (49%) from Bolivia. In addition, one can also see that, regarding total trade, US is an important destination for Colombian and Ecuadorian exports, at 33% and 27% of the total, respectively. For Peru and Bolivia the share is lower, at 14% and 5%, respectively.

TABLE 3: CAN EXPORTS TO THE US, PER EXPORTING COUNTRY, 2-DIGIT LEVEL HS, IN THOUSANDS OF DOLLARS, AVERAGE OF 2016-2020

US	Product	Exports US\$ in thousands	%	Andean dependence	US dependence
Bolivia	All products	438010.333		5%	0.02%
80	Tin and articles thereof	158445.333	36%	49%	18%
71	Precious or semi-precious stones	117860.333	27%	6%	0%
10	Cereals	36486	8%	38%	1%
8	Edible fruit and nuts	26466.6667	6%	14%	0%
26	Ores, slag and ash	14035.6667	3%	1%	0%
Colombia	All products	10853749.5		31%	0.4%
27	Mineral fuels,	5618138.5	52%	33%	3%
6	Cut flowers and ornamental foliage	1152943	11%	79%	38%
9	Coffee, tea, maté and spices	1056236.5	10%	43%	12%
71	Precious or semi-precious stones	888306.5	8%	36%	1%
76	Aluminium and articles thereof	257895.5	2%	77%	1%
Ecuador	All products	5759647		27%	0.2%
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances	2788062	48%	40%	2%
3	Fish and crustaceans, molluscs	844714.5	15%	20%	4%
8	Edible fruit and nuts	640605.5	11%	17%	3%
6	Cut flowers and ornamental foliage	363600.5	6%	42%	12%
71	Precious or semi-precious stones	210520	4%	69%	0%
Peru	All products	5896193		14%	0.2%
8	Edible fruit and nuts	1380334	23%	39%	7%
71	Precious or semi-precious stones	976861	17%	14%	1%
61	Articles of apparel and clothing accessories	542436	9%	69%	1%
7	Edible vegetables	374352.5	6%	56%	3%
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances;	381259	6%	17%	0%

Source: author's own calculations with data from UN-Comtrade

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To complement the foregoing, we analysed the competition that Andean exports face in both China and the US (see Table 4 and Table 5). The largest Andean exports to both countries were compared to those of other sellers of the same products to determine if any products enjoyed a significant market share. A product was deemed significant if CAN is located among the first five exporters to China or the US. As presented in the Table below, the Andean nations have an important role as providers of six exports to the US and five to China. Respecting the US (see Table 4), CAN's strength in flowers is attested by Colombia and Ecuador being the largest providers, accounting for a 64% and 21% share of the US market, respectively. And Colombia is the main provider of coffee with 20% of the total. Following the same rationale, Peru is an important provider of two minerals highly in demand by US industry, zinc and molybdenum, with 89% and 60%, respectively. Peru has strength in grapes and berries as well, with 31% and 13%, respectively. Finally, Ecuador accounts for 18% of the US banana market, which makes it the second largest provider. The case of Bolivia stands out as barely reaching 2% of trade flows, using aggregate data, yet provides two products on which the US is strongly dependent: tungsten and aluminium, with 36% and 37% of the US total, respectively.

TABLE 4: US IMPORTS FROM CAN NATIONS OF SELECTED PRODUCTS, IN THOUSANDS OF DOLLARS, AVERAGE OF 2016-2020, INCLUDING AVERAGE TARIFF

United States of America								
Product country /	Imports (US\$ thousand)	Average MFN tariff (%)	Product country /	Imports (US\$ thousand)	Average MFN tariff (%)	Product country /	Imports (US\$ thousand)	Average MFN tariff (%)
0603 Flowers	1,535,291		0306 Crustaceans	7,698,269		0709 Vegetables	4,092,606	
Colombia	64%	0	India	26%	0	Mexico	67%	0
Ecuador	21%	1.1	Canada	19%	0	Canada	18%	0
Netherlands	4%	6.1	Indonesia	12%	0	Peru	8%	0
Canada	4%	0	Russian Federation	11%	0.4	Honduras	2%	0
Mexico	2%	0	Ecuador	10%	0	Netherlands	1%	0
0901 Coffee	5,675,614		0810 Berries	4,195,434		2709 Petroleum oil	81,821,051	
Colombia	20%	0	Mexico	67%	0	Canada	56%	0
Brazil	19%	0	Peru	13%	0	Mexico	11%	0
Switzerland	8%	0	Chile	8%	0	Saudi Arabia	9%	0.2
Canada	7%	0	Canada	3%	0	Colombia	4%	0
Guatemala	6%	0	New Zealand	2%	0.3	Iraq	4%	0.2
0803 Bananas	2,799,876		0806 Grapes	1,918,481		1008 Buckwheat	131,748	
Guatemala	38%	0	Chile	37%	0	Bolivia	37%	0.7
Ecuador	16%	0	Peru	31%	0	Peru	35%	0
Costa Rica	16%	0	Mexico	7%	0	Canada	13%	0
Honduras	8%	0	Brazil	19%	0.6	Spain	4%	0.7
Mexico	8%	0	South Africa	10%	0	India	2%	0.7
2613 Molybdenum	455,773		2611 Tungsten	72,762		2608 Zinc	6,947	
Peru	60%	0	Bolivia	36%	0	Peru	89%	0
Mexico	14%	0	Portugal	23%	0	Canada	11%	0
Chile	16%	0	Russia	10%	0	Mexico	0%	0
Canada	10%	0	Spain	11%	0			

Source: author's own calculations with data from UN-Comtrade

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Respecting China (see Table 5), it is noteworthy that only Peru is among the five largest providers of several goods. The other three Andean nations sell no product on which China is largely dependent. The most conspicuous case is copper, for 22% of which China is dependent on Peruvian exports. Given that Peru together with Chile sells more than 50% of the copper that China imports, one can conclude that China is strongly dependent on Andean exports. The same can be said of Peru's exports of zinc, lead, and precious metal ores, which represent 19%, 22% and 15% of China's imports, respectively. An additional fact to consider is that Peru is an important source of China's imports of raw copper; unlike Chile, which ranks about as high as to China's imports of refined copper, Peru's exports are mostly concentrates and ores with no added value. Finally, Peru is a main source of China's imports of fish flour, with 41% of the total. This is used to feed animals; thus, it can be argued that Peru plays a significant role in China's food security.

As for competitors, given that most products in Table 5 are minerals, it comes as no surprise that the main competitors of CAN are major minerals exporters like Chile, Russia, and Australia. In addition, there are other products worth mentioning inasmuch as they mean a lot to CAN but not to China—as none of the countries were among the top 5 exporters. Zinc is one of Bolivia's major exports to China but only represents 1.4% of China's zinc imports, for example. Similarly, Peru's exports of iron surpassed US\$1 billion in 2020 but they hardly rank 8th amid China's imports. Colombia's exports of petroleum briquettes (2701) and petroleum coke (2703) reached US\$100 million and US\$89 million in 2020, respectively, but ranked only 7th largest among Chinese sources in both cases.

TABLE 5: CHINESE IMPORTS FROM CAN NATIONS OF SELECTED PRODUCTS, IN THOUSANDS OF DOLLARS, AVERAGE OF 2016-2020, INCLUDING AVERAGE TARIFF

China					
Product country /	Imports (USD thousand)	Average tariff (%)	Product country /	Imports (USD thousand)	Average tariff (%)
2603 Copper	34,297,835		2616 Precious metals	4,309,663	0
Chile	34%	0	Mexico	22%	0
Peru	22%	0	Russia	17%	0
Mexico	8%	0	Peru	15%	0
Mongolia	5%	0	Australia	7%	0
Australia	4%	0	Kazakhstan	6%	
2301 Fish flour	2,210,054		2608 Zinc ore	2,472,212	0
Peru	41%	0	Australia	36%	0
US	14%	3.5	Peru	19%	0
Chile	8%	0	Russia	6%	0
Viet Nam	7%	0	Eritrea	5%	0
Russia	5%	3.5	South Africa	4%	
4421 Articles of wood n.e.s.	724,917		2607 Lead ore	1,714,467	0
Ecuador	56%	0	Russia	22%	0
Indonesia	32%	0	Peru	22%	0
Russian Federation	4%	0	US	9%	0
Papua New Guinea	2%	0	Turkey	9%	0
Italy	1%	0	Australia	7%	0

Source: author's own calculations with data from UN-Comtrade

4. OPPORTUNITIES FOR ANDEAN COUNTRIES

The last of the aims of this paper is to project future export opportunities for Andean countries, as to which products can bring the most return on investment from the trade war between China and the US, while also affording alternatives to primary dependence. It should be understood that the following analysis is based on existing trade and will not speculate on possible export scenarios. An opportunity will be argued to have been found if the product is currently being exported by an Andean country to the world and if, at the same time, it is important in the trade flows between the great powers. Each of the two is analysed separately. The Tables below summarize the positive results when the value of imports (China first, then the US) promises a significant opportunity in added-value goods for the Andean countries. The potential market threshold was set at a minimum of 5% of current Andean exports.⁸ bear in mind that the aim is to find export opportunities beyond minerals and hydrocarbons in their raw state (sections 26 and 27 of the Harmonized System) which already account for most of current exports; hence, the products belonging to those chapters have not been taken into account.

⁸ The Table with the detailed products at the 4 digit-level can be found in the Annexes.

TABLE 6: EXPORT OPPORTUNITIES TO CHINA FOR ANDEAN COUNTRIES, BASED ON AVERAGE EXPORTS FROM 2015-2019

Country	Number of products (4 digit HS)	Exports (US\$ thousand)	China imported from US 2019 (US\$ thousand)	% of total exports	China's average tariff (%)
Bolivia	12	595,271	1,131,166	8%	7.67
Ecuador	20	5,265,832	6,460,971	26%	6.89
Peru	8	2,999,259	925,960	8%	7.88
Colombia	42	4,361,415	10,903,501	14%	7.44
Total	82	13,221,777	19,421,598		

Source: author's own calculations with data from UN-Comtrade

Respecting opportunities to China (see Table 6), CAN altogether has a potential market of US\$ 19,42 billion in China for products which available offer reached US\$ 13,22 billion in 2019. The first concept, potential market, means the total Chinese imports of these products from all the countries in the world in year 2019. That is, the value of the actual Chinese imports. The second concept, available offer, makes reference to the total Colombian exports of those goods to all the countries in the world in year 2019. That is, the value of the actual Colombian exports. The usefulness of this simple methodology provides the option to combine existing demand (in China) with existing supply (in the Andean countries). So, by using both values together we find a first indication of possible business opportunities but for products that have a significant production.

A country-specific analysis shows that Colombia's case stands out within CAN. As noted earlier, Colombia has the most diversified export base, which includes several industrial goods. Specifically, 56 Colombian exports overlap with China's main imports from the US, of which 41 have a potential market share of more than 5%. Hence, it can be argued that Colombia is the Andean nation with the most opportunities. In total, the potential market is US\$10.9 billion and the Colombian available offer is US\$4,36 billion (or 14% of total Colombian exports). Several industrial products from Colombia have a huge potential market as noted in Annexe 3, but five sectors stand out as offering the largest opportunities: (1) medicaments, perfumery, and cosmetics, (2) insecticides, (3) plastics and polymers, (4) electrical machinery and equipment, and (5) motor vehicles. Two observations need to be made about the fact that Colombia, unlike the other Andean countries, exports such goods.

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First, unlike commodities and basic goods, these Colombian-finished goods have to compete with brand loyalties owned by multinational companies; exporting them to the Chinese market is complicated. This is the case especially with motor vehicles and cosmetics (beauty and make-up preparations) and medicaments, all of which are high added-value goods. Second, unlike Chile and Peru, Colombia has no free trade agreement with China, posing an additional challenge. Since the aforementioned products are high added-value goods, they face significant tariffs: 15% for motor cars, 12% for bovine meat, 13% for preparations and cosmetics, 11% for tires.

Surprisingly, Peru, despite its large export volumes, is the country with the fewest opportunities in the Chinese market, with only 8. Yet they represent a potential market in China of US\$925 million for products which had an available offer of US\$3 billion (Peruvian exports to the world) in 2019. China offers a large market for Peru's food and agricultural products, like crustaceans, molluscs, and fruits. But the main difference from the other Andean nations is that the opportunities for manufactured goods are larger. The largest opportunity for Peru is for fish flour, which already accounted for more than US\$1 billion in exports. A smaller but interesting potential market has been found for fish oil, copper wire, and goods packaging. As for tariffs, Peru has a Free Trade Agreement (FTA) with China which gives its products the significant additional advantage compared with other nations—that the average tariff on the 8 potential opportunities is only 7.88%.

Ecuador, notwithstanding its small economy and industrial capacity, is the country with the second largest opportunities, with 20 products that could reach US\$6.2 billion in potential sales to China. In 2020 these 20 Ecuadorian exports to the world totalled US\$5.2 billion, that is, 8% of its total exports. Specifically, Ecuador has huge opportunities to replace US exports to China in agricultural and food products like frozen fish, fish fillets, and crustaceous (like Peru), but also in others like coffee and vegetables, and more added-value goods like fruit juices and flour. Many opportunities have also been found for light manufactures like pneumatic tires; tubes and pipes; insulated wire cables; plates, sheets, foil, and strips; animal food; and wooden products. Motor vehicles for the transportation of goods are a product of heavy manufacture with a huge destination market of US\$164 million. The most emblematic case is medicaments, which have a potential market of more than US\$2 billion in China. Ecuador's MFN tariffs are zero yet its exports to the world totalled a mere US\$22 million in 2020. As in the cases of Bolivia and Colombia, tariffs are highly significant, considering that these nations have no FTA with China. Specifically, they are 15% for motor vehicles, 11% for tires, 14% for juices, etc. The average tariff for Ecuador's 20 opportunities is only 6.89%.

Finally, 12 products were found for Bolivia, notwithstanding its small size and lack of export diversification. The most significant market is agricultural goods, with large opportunities for peanuts, palm hearts, bovine meat, and dairy products; and smaller opportunities for coffee and oleaginous seeds. One manufactured good stands out as also the largest Bolivian export in its sector: jewellery. This was part of the diversification of the late 1990s, but has suffered recently from a drop in demand in its largest market, the US. Bovine meat may be the product offering the largest return on investment, as export of it from Bolivia to China has already grown 544% in the past four years due to a successful bilateral negotiation. In total, the 12 Bolivian exports found accounted for US\$595 million (or 8% of total Bolivian exports) and the Chinese market represents a potential US\$1.131 billion. Therefore, despite so few opportunities—none of which are industrial goods—the good news is that these opportunities can be materialized in size and could double the current export rates. The bad news is China's tariffs, which are still significant, with an average of 7.67% for all 12 opportunities. Products like baked goods, coffee, bovine meat, and soya oil face tariffs higher than 9%.

TABLE 7: EXPORT OPPORTUNITIES IN THE US FOR ANDEAN COUNTRIES, BASED ON AVERAGE EXPORTS FROM 2015-2019

US	Number of products (4 digit HS)	Exports 2019 (US\$ thousand)	US imports from China (thousand)	% of total exports 2020	US average tariff
Bolivia	8	301,916	1,099,506	4%	4.75
Ecuador	24	2,915,784	12,172,757	14%	5.00
Peru	9	1,963,961	4,496,887	5%	5.67
Colombia	40	4,287,809	53,343,241	14%	4.35
Total	78	9,469,470	71,112,391		

Source: author's own calculations with data from UN-Comtrade

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Turning to the US (see Table 7), Colombia is again the nation with the most opportunities (40), Ecuador is second (24), Peru third (9), and Bolivia last (8). In total, opportunities in the US market total US\$71.11 billion, and in 2019 the Andean nations exported US\$9.46 billion worth to the world. This means that the potential market is more than 10 times the volume of the current Andean exports of the 78 products. Furthermore, while these opportunities were of little importance to Bolivia and Peru in 2019 (representing only 4% and 5% of their total exports to the world, respectively), they are quite significant to Colombia and Ecuador, representing 14% in both cases.

Country-specific analysis tells us that Colombia has great market opportunities. The 40 Chinese products that Colombia has the potential to replace have a potential market of US\$53.34 billion, that is, a market almost 12 times larger than the current Colombian exports of those products to the world. Note well that, unlike the other Andean nations, most of Colombia's specific opportunities are concentrated in the manufacturing chapters (Annexe 5). Opportunities were found in the food and agricultural chapters for sure—fish, margarine, sugar, cocoa, fruits—but they account for only 20% of the total. The other 80% fall into section VI of the Harmonized System (chemical and allied industries), section VII (plastics and rubber products), section X (wood pulp and other fibrous cellulosic material), and section XVII (vehicles, aircraft, vessels and transport equipment).

At a four-digit level, the foregoing refer to products like insecticides, polymers, medicaments, extracts of coffee, motor vehicles, beauty and make-up preparations, sugar, electric accumulators, refrigerators, digital-storage devices, clothing, perfumes, furniture, insulated cable, etc. In addition, average tariffs applied by the US give Colombia an additional advantage: its FTA with the US and the MFN tariffs that the US applies increase the competitiveness of Colombian products insofar as Colombia does not pay them. This additional protection is highly significant given a tariff of more than 10% on products like sugar, fruits, textiles and clothing, and coffee and cocoa preparations, reaching even 22% for motor vehicles. Other products have a moderate advantage as US MFN tariffs average 5% for insecticides, polymers, film foil, and film strips.

For Peru, the second largest economy within CAN, only 9 opportunities were found. Unlike Colombia, most of them fall in the first chapters of the Harmonized System, which means fewer transformative processes. The US potential market for Peru's products which replace Chinese exports is especially large in section II (vegetable products), section IV (prepared foodstuffs), and section I (animal products). At a four-digit level, some specific products are ginger, onions, molluscs, crustaceans, and other fish. Three opportunities belong to manufactures with high growth potential for Peru: shirts, T-shirts, and conveyance or packaging articles. Together Peru's exports of them to the world totalled US\$548 million in 2019, and the potential market in the US is US\$2.7 billion. Regarding tariffs, as in the case of Colombia Peru benefits from the additional advantage of having an FTA with the US. Given that the US raises a high wall of protection for textiles and clothing—20% for shirts and 16% for T-shirts—these products have high growth opportunities. In the remaining 6 opportunities, Peru has a less large advantage, with tariffs between 3% and 5%.

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For Ecuador, most of whose opportune products belong to the first sections of the Harmonized System, as shown in Annexe 5, significant opportunities are also found in manufactures. A big share of market opportunities reside in section I (animal products), section II (vegetable products), and section IV (prepared foodstuffs). At a four-digit level, this means products like fish (0303, 0304, 1604, 1605), fruits and vegetables (0710, 0714, 0811, 2005), grains (1006), coffee extracts (2101), and jams and juices (2007, 2008, 2009). But there are also manufactured products belonging to other sections, like section VII (plastic and rubber articles), section IX (wood articles), section XV (articles of metal). There are even two products in the last sections of the HS which are medium-tech manufactures: insulated wire and motor vehicles. Regarding tariffs, Ecuador has no FTA with the US, so that its products face a medium US protection level which hinders its competitiveness. This may go as high as 22% for motor vehicles, 12% for fruits, 9% for some vegetables, and 7% for prepared fish. Other opportunities of Ecuador faces tariffs of 3% to 5%. The specific medicaments that Ecuador can export stand out as a major business opportunity given that, aside from the large size of the US market, the tariff currently charged is zero.

Finally, Bolivia has 8 opportunities market to replace imports from China in the US. Half of the products come from the first sections, that is, animal, vegetable, and other edible products. The total market opportunity amounts to US\$572 million and includes products like sugar, leguminous vegetables, oil seeds, and nuts. Of these four, sugar and nuts face high tariffs (16% and 12%, respectively). Four more opportunities were found for Bolivia in the manufacturing sections: specifically, we refer to oilcake, wood for parquet flooring, jewellery, and refined copper. The potential market size for these four is US\$526 million. Considering that they are added-value manufactures, the tariffs they face are remarkably low. Only jewellery faces 6%, while the other three pay a 1% tariff to enter the US market. In total, potential sales of the 8 products amount to US\$1 billion, while Bolivia's exports of these goods to the world reached only US\$300 million in 2019; that is, the potential market is three times larger than Bolivia's current exports.

5. CONCLUSIONS

Andean Community (CAN) trade relations with both the US and China follow a typical centre-periphery model. CAN sells mostly natural resources and a few agricultural goods, while at the same time importing a diversity of finished goods. Plus, while China and the US are among its most important trade partners, CAN barely represents 1% of the trade flows of both. One issue that ought not to go unnoticed is that trade with the US is more balanced: while China's imports from CAN are almost entirely basic goods, the US purchases significant amounts of goods that make part of the region's productive diversification efforts since the 1990s, like jewellery, coffee, textiles, furniture, plastics, and even refined minerals like unwrought tin

In addition, even though some industries in the US and China are dependent on raw materials imported from the Global South, in specific analyses to measure dependency it was found that CAN is more dependent on the US and China than the other way around. In other words, China and the US have diversified their imports from nations of the South, while CAN's exports go almost exclusively to China or the US. Nevertheless, specific products were found in which the Andean nations could have a strong position as sellers. This holds firm for consumer goods that pose no geopolitical threat to US, like flowers from Ecuador and Colombia, coffee from Colombia, bananas from Ecuador, or berries from Peru; yet highly strategic inputs for industry may also be opportunities, like tungsten and aluminium from Bolivia. In the case of China, it is egregious that only Peru is among the five most important exporters of any good. The other three Andean nations offer no product on which China is largely dependent. The most notorious case is copper for which China is dependent on Peruvian exports for 22%. The same can be true of Peru's exports of zinc, lead, and precious metal ores, which represent 19%, 22%, and 15% of China's global purchases, respectively.

Finally, the last section explored deeply the opportunities that arise for CAN from the trade war and the expected decoupling process. Some added-value manufactures were found that can substitute for goods traded between China and the US. It can be argued that these products represent a huge opportunity for the Andean nations to shift away from primary export dependency to manufactured goods. For export to China, 82 products were found (at 4-digit level of the Harmonized System) that could be substituted for imports from the US. CAN exports of these goods currently total US\$13.2 billion but the potential market in China is US\$19 billion. Most of these goods face an average tariff of between 5% and 10%, and Peru has the additional advantage of being the sole Andean nation with an FTA with China. For export to the US, 78 products were found. Together they had an export value of US\$9.4 billion (average of 2015-2019) and a potential market in the US of US\$71.1 billion. If we analyse specific countries, Colombia has more opportunities than the others, both in China and the US. Still, it is interesting that Ecuador ranks second, while Peru has the fewest opportunities, along with Bolivia.

DISCLAIMER: : The views and opinions expressed in this working paper are those of the author(s) and do not necessarily reflect the views or positions of the LSE Global South Unit or LSE IDEAS. The author(s) retain sole responsibility for any errors or omissions.

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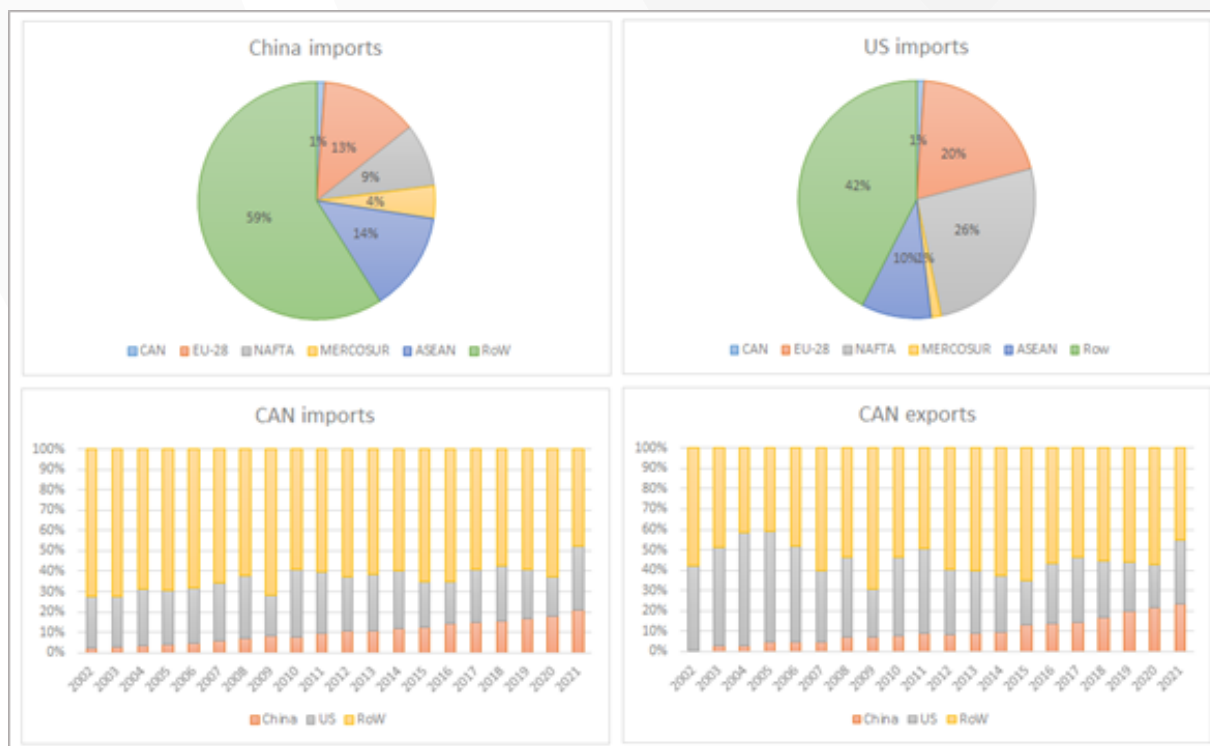
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ANNEXE

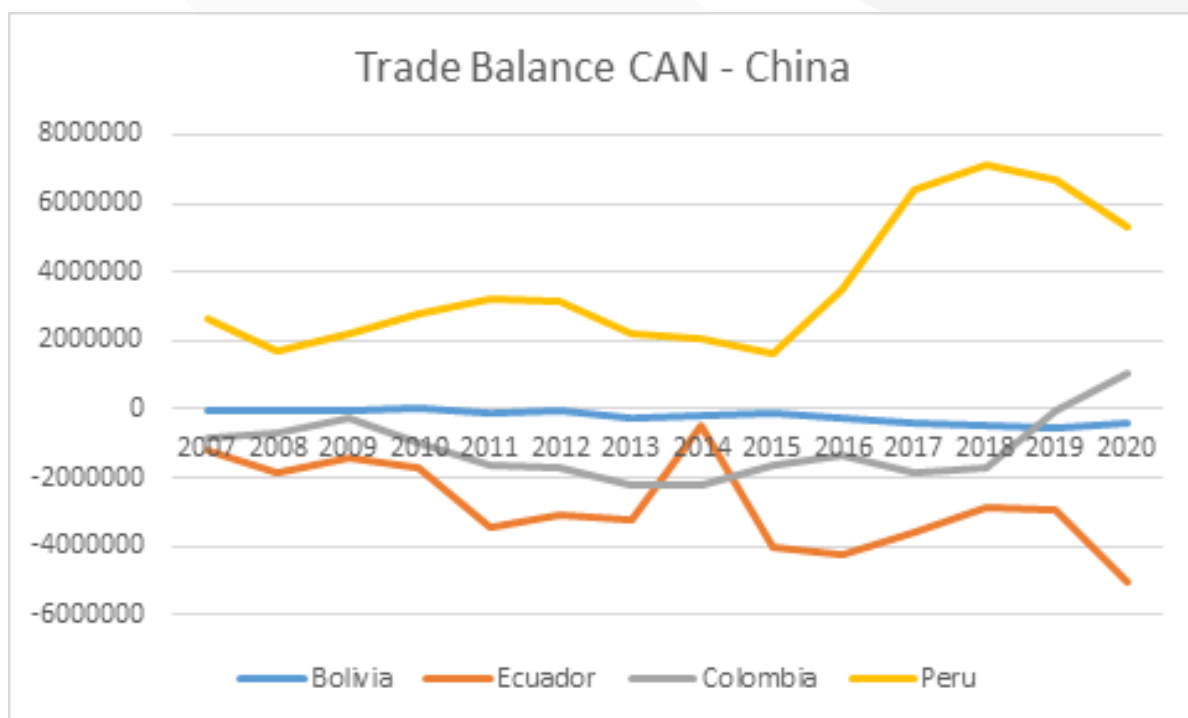
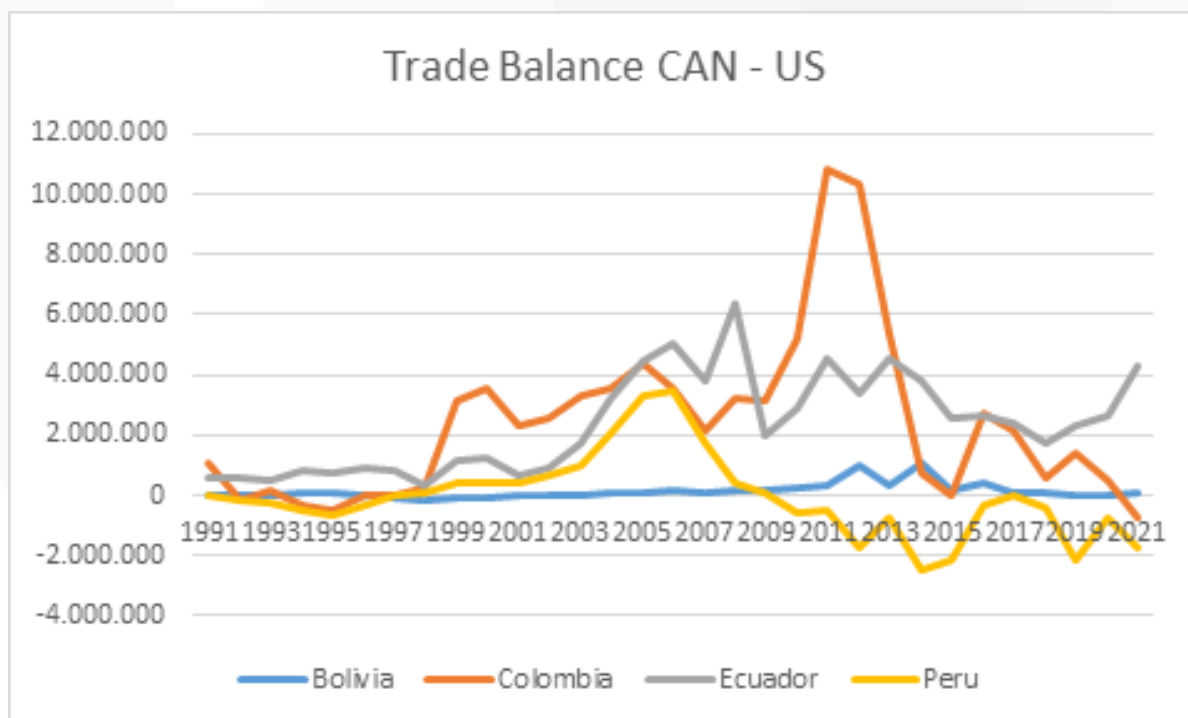
Annexe 1: CAN trade with China and the US

Figure 2: CAN trade with China and the US, imports and exports, according to value, in percentage



Source: author's own calculations with data from UN-Comtrade

Annexe 2: Evolution of trade balance of the CAN with China and the US



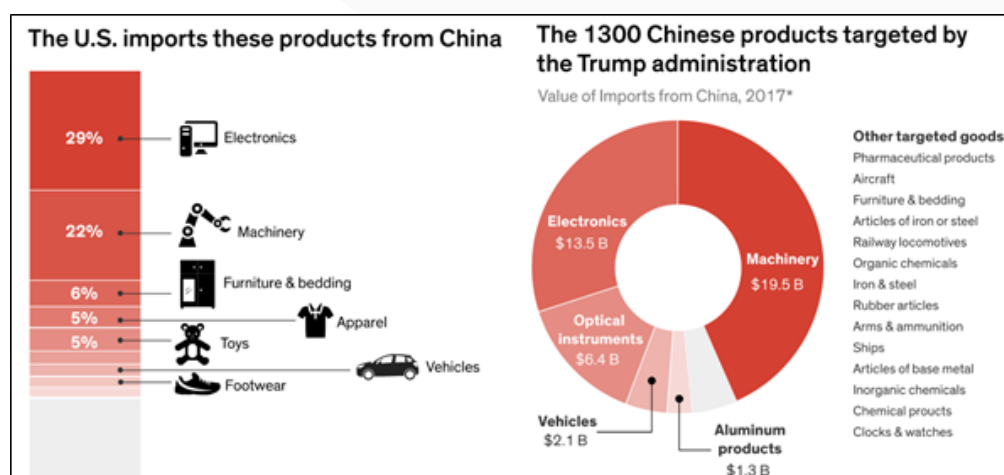
Annexe 3: Top CAN exports to China and US, 4-digit level

CAN exports to China				
Product code	Product label	China from CAN	CAN to world	China from World
	TOTAL	23,967,566	110,838,567	2,086,509,377
2603	Copper ores and concentrates	8,751,981	11,443,972	33,702,042
2709	Petroleum oils from bituminous minerals, crude	5,688,412	18,187,989	218,083,566
0306	Crustaceans, whether in shell or not, live, fresh	1,358,454	3,899,937	5,769,978
2601	Iron ores and concentrates, incl. roasted iron	1,320,930	1,400,930	97,932,799
7403	Copper, refined, and copper alloys, unwrought	1,222,917	1,757,364	26,239,535
2616	Precious-metal ores and concentrates	1,046,874	1,300,800	3,974,812
2301	Flours, meals and pellets, of meat or meat offal,	1,125,791	1,486,559	2,300,515
2608	Zinc ores and concentrates	609,134	2,805,267	2,748,319
4421	Other articles of wood, n.e.s.	185,345	190,345	547,559
2711	Petroleum gas and other gaseous hydrocarbons	238,205	3,330,993	48,155,545
2607	Lead ores and concentrates	310,092	1,102,652	1,846,615
7202	Ferro-alloys	373,260	513,736	8,417,940
803	Bananas, incl. plantains, fresh or dried	223,335	4,529,452	974,811
806	Grapes, fresh or dried	138,241	857,267	672,704
4407	Wood sawn or chipped lengthwise,	93,625	250,655	8,788,721
2613	Molybdenum ores and concentrates	53,159	549,073	423,599
2701	Coal; briquettes, ovoids and similar solid fuels	83,896	5,037,940	18,300,406
0810	"Fresh strawberries, raspberries, blackberries.	79,411	1,000,796	3,250,935
0307	Molluscs, fit for human consumption	84,217	561,508	1,331,414
1605	Crustaceans, molluscs and other	94,856	261,052	176,121
202	Meat of bovine animals, frozen	18,005	77,286	7,455,335
303	Frozen fish (excluding fish fillets and meat)	38,733	209,611	4,473,462
7402	Copper, unrefined; copper anodes	36,747	81,048	5,566,167
1504	Fats and oils, fractions of fish/marine mammals	47,142	395,884	227,434
804	Dates, figs, pineapples, avocados, guavas,	44,364	1,211,746	953,384
2704	Coke and semi-coke of coal, of lignite or peat	13,366	759,619	276,927
8001	Unwrought tin	11,865	614,811	149,949
7901	Unwrought zinc :	31,860	692,308	1,900,366
1212	Locust beans, seaweeds and other algae, sugar	29,518	29,796	432,955
0901	Coffee, whether or not roasted or decaffeinated;	21,733	3,070,412	294,914
0805	Citrus fruit, fresh or dried	17,621	266,749	573,197
4403	Wood in the rough, whether or not stripped	27,165	71,823	9,607,747
7207	Semi-finished products of iron or steel	5,937	4,889	2,765,057
1404	Vegetable products, n.e.s.	16,470	37,508	120,416
5105	Wool and fine or coarse animal hair, carded	38,761	66,126	112,305
7203	Ferrous products obtained by of iron ore	4,125	0	488,347
7103	Precious stones and semi-precious stones	21,276	111,863	472,392
6307	Made-up articles of textile materials, incl. dress	4,186	29,236	585,978
2528	Borates, natural, and concentrates thereof, }	11,577	48,080	125,701

CAN exports to US				
Product code	Product label	CAN to US	US from world	CAN to world
TOTAL	All products	15,444,403	2,635,844,102	74,653,304
8001	Unwrought tin	260,303	804,516	565,579
7108	Gold, incl. gold plated with platinum	1,303,642	19,420,528	7,953,490
801	Coconuts, Brazil nuts	31,552	1,381,624	167,767
1008	Buckwheat, millet, canary	68,483	118,966	172,986
7113	Articles of jewellery	67,817	10,198,910	215,651
2611	Tungsten ores and concentrates	13,900	53,436	22,959
2528	Borates, natural, and concentrates	6,593	28,586	56,466
2825	Hydrazine and hydroxylamine	7,311	516,849	19,795
2709	Petroleum oils, crude	4,318,906	117,516,872	10,949,528
4409	"Wood, incl. strips and friezes for parquet	5,971	1,529,345	68,048
7403	Copper, refined, and copper alloys	57,167	5,669,935	1,137,963
7106	Silver, unwrought or in semi-manufactured	77,762	5,273,178	284,096
4418	Builders' joinery and carpentry, of wood	8,464	2,661,372	10,876
9401	Seats	16,537	25,828,934	32,817
8411	Turbojets, turbopropellers and other gas turbines	15,078	23,401,658	19,975
1207	Other oil seeds and oleaginous fruits,	8,430	351,200	65,529
4205	Articles of leather or composition leather	19,680	204,308	22,341
6501	Hat-forms, hat bodies and hoods of felt	2,307	14,925	11,305
4407	Wood sawn or chipped lengthwise, sliced or peeled	10,558	9,617,863	229,241
901	Coffee, whether or not roasted or decaffeinated; coffee	816,476	6,146,202	2,064,914
9403	Furniture and parts thereof, n.e.s. (excluding seats).	18,736	27,750,333	53,984
7112	Waste and scrap of precious metal or of metal clad	21,129	3,487,140	30,617
2836	Carbonates; peroxocarbonates, percarbonates	678	320,730	6,970
8421	Centrifuges, incl. centrifugal dryers	2,161	10,942,252	10,706

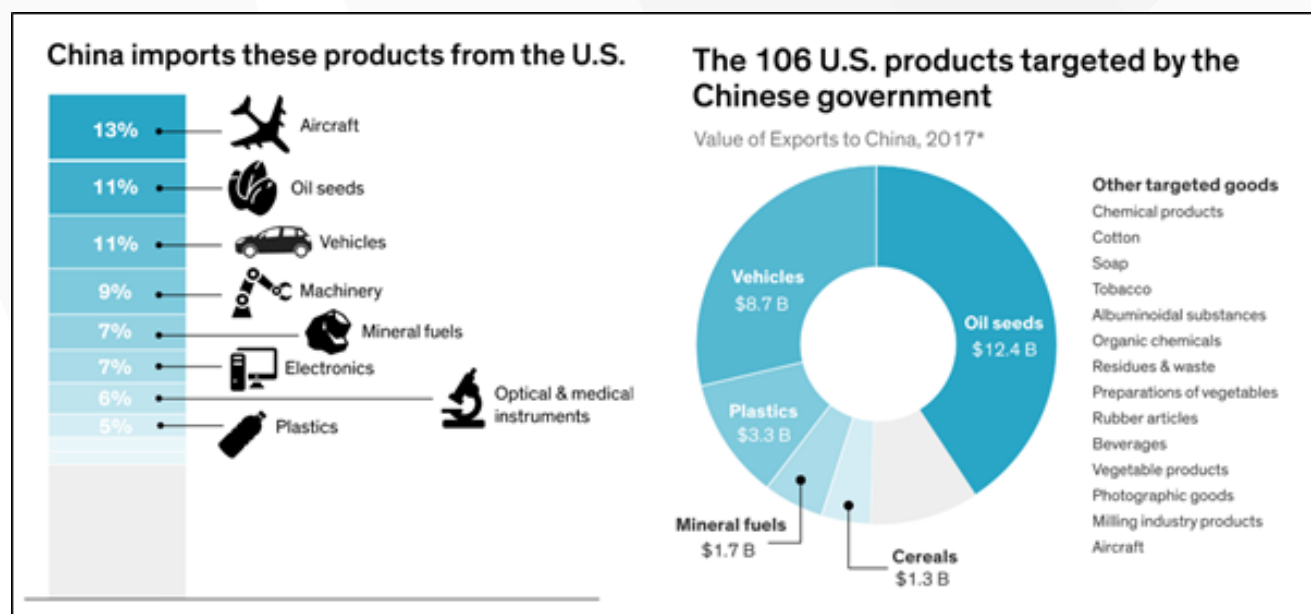
Annexe 4: US-China tariff rise since 2018

Graph 1: US tariffs applied to Chinese imports since 2018



Source: <https://www.barrons.com/articles/the-brewing-u-s-china-trade-war-explained-in-charts-1523052689>

Graph 2: Chinese tariffs applied to US imports since 2018



Source: <https://www.barrons.com/articles/the-brewing-u-s-china-trade-war-explained-in-charts-1523052689>

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