

FMSO's Military DIME (M-DIME) Research Project

Tracking Russian and Chinese military influence in states around the world

Instruments of Chinese Military Influence in Chile

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OVERVIEW OF FMSO'S M-DIME RESEARCH PROJECT

The Military DIME (M-DIME) Research Project is a dynamic effort from researchers at the U.S. Army Training and Doctrine Command's Foreign Military Studies Office (FMSO). Its goal is to provide Army leaders with a clear, comparative understanding of how China and Russia employ instruments of national power to obtain military influence around the world. The M-DIME framework is derived from the "DIME" concept, which classes instruments of national power into four types: Diplomatic, Informational, Military, and Economic. Based on this concept, the M-DIME framework gives more narrow attention to the instruments that China and Russia employ to gain military influence in third-party countries.

The M-DIME framework's purpose is to track and analyze the military influence of "Benefactor" countries (i.e. China and Russia) in select "Recipient" countries in Africa, Latin America, the Middle East, and South and South-east Asia. Benefactor countries are assumed to engage in activities that result in them having increased military influence in Recipient countries to gain leverage over global rivals, competitors, and adversaries; for China and Russia, this means the United States. Within this framework, "military influence" is defined as the ability of a Benefactor country to shape or alter the attitudes, behaviors, and capabilities of actors within—and entities associated with—the armed forces of Recipient countries.

The M-DIME framework identifies 12 distinct instruments of national power employed by Benefactor countries to gain military influence in Recipient countries, three for each of the DIME categories. They are as follows:

DIPLOMATIC INSTRUMENTS

- D1 Defense-Related Diplomacy
- D2 International Military Education and Training
- D3 Soft Power Activities

INFORMATIONAL INSTRUMENTS

- I1 Cultural and Media Outreach, Collaboration, and Alignment
- I2 Information and Communications Technology (ICT) Support
- I3 Cooperation in Military Intelligence and Communications

MILITARY INSTRUMENTS

- M1 Formal Bilateral Military Engagements
- M2 Shared Informal/Multilateral Military Engagements
- M3 Defense/Security Pacts and Agreements

ECONOMIC INSTRUMENTS

- E1 Arms Transfers
- E2 Technology-Sharing and Joint Production Agreements
- E3 Trade and Cooperation in Strategic Commodities/Sectors

M-DIME analysis is based on qualitative assessments of Benefactor influence in Recipient countries along each of the 12 M-DIME instruments of influence. These assessments are made for the Benefactor's **Current Influence** (assessed as Very High, High, Medium, Low, Very Low, or Unobserved) and **Projected Influence** (assessed as Increasing, Steady, Decreasing, or Unknown). Current assessments are made based on activities from 2012 to the present, while future assessments are three-year forecasts.


The bulk of activities considered in the M-DIME Research Project involve members of the armed forces or defense sector personnel in both Benefactor and Recipient countries. Such activities include formal and informal military-to-military diplomacy, security cooperation engagements, and arms transfers. However, the M-DIME Research Project also tracks and analyzes Chinese and Russian activities that employ non-military instruments of influence but ultimately bear on the decision-making and capabilities of the Recipient country's armed forces. Such activities include Chinese and Russian collaboration with Benefactor states in media, communications technology, and strategic sectors.


The M-DIME Research Project's findings are derived from open-source research. Each M-DIME product is produced with the collaboration of analysts from across FMSO, frequently with the assistance of non-Department of Defense subject matter experts coming from academia, think tanks, and the private sector. Given its basis in open-source research, the M-DIME Research Project has an inherent limitation. It cannot track Chinese and Russian military influence activities that are deliberately kept secret. Consequently, assessments of Chinese and Russian influence based on instruments for which secrecy is important or where information would typically be classified by the Benefactor or Recipient countries—for instance, military-technology sharing or intelligence collaboration—are acknowledged to be made with low confidence. Assessments of **Projected Influence**, unless otherwise stated, are also made with low confidence given pervasive information gaps and the potential for bilateral dynamics to quickly shift. In certain cases, assessments are not made where open-source data is considered inconclusive

In sum, the M-DIME Research Project is a tool for U.S. Army and U.S. Government personnel to better understand the instruments of national power employed by China and Russia to gain global military influence and the impact these activities have on U.S. national security interests. Over time, FMSO will expand the body of research and assessments based on this framework, increasing its comparative value across Benefactor and Recipient countries.


KEY ASSESSMENTS

China’s current M-DIME influence in Chile is assessed as Very Low. Some of the most important instruments contributing to China’s current military influence in Chile include:

 **Trade and Cooperation in Strategic Commodities/Sectors (E3).** China’s interest in procuring lithium for its electric vehicle (EV) market and vehicle battery industry will necessitate the continued use of this instrument. Chile is one of the world’s largest producers of lithium and the largest in Latin America, while China is among the most dependent on Chile’s lithium carbonates because of its limited domestic supply.¹ While China is the world’s largest consumer of lithium, it is situated in every aspect of the lithium supply chain, especially in the lithium refining capacity for batteries where it supplies the world with 80 percent of its battery cells.² Copper—another strategic resource—accounts for 84 percent of the total export value Chile sends to China.³ Chile’s economic dependency on China, its main trading partner,⁴ will reinforce Beijing’s drive to import these strategic resources.⁵

 **Cultural and Media Outreach, Collaboration, and Alignment (I1).** China has pierced Chile’s media ecosystem. It does this by providing free content to Chilean media outlets. For example, Xinhua—China’s state news agency—contributes content to ChileCn, a Chinese website that carries Chilean news in Spanish and Mandarin.⁶ Chilean newspapers like El Mercurio and La Tercera accepts Chinese content, both paid and free.⁷ This media collaboration and outreach, while attempting to portray China in a favorable light, are more influential when discussing Beijing’s economic relationship with Chile.⁸ From 2018 to 2021, large majorities of opinion pieces published in major Chilean newspapers portrayed China as an economic boon to the country.⁹

China’s projected M-DIME influence in Chile is assessed as Steady. Some of the most dynamic instruments informing China’s projected military influence in Chile include:

 **Trade and Cooperation in Strategic Commodities/Sectors (E3).** For the foreseeable future, China will continue to need Chilean lithium exports for its EV industry—it dominates production in this market.¹⁰ In 2023, China’s Tsingshan Holding Group announced it would invest \$233.2 million to set up a plant in Chile to produce lithium iron phosphate (LFP) batteries, used to power EVs.¹¹

| DIPLOMATIC / INFORMATION | | | MILITARY / ECONOMIC | | |
|--------------------------|-----------|-----------------------------------------------------|---------------------|-----------|----------------------------------------------------|
| | D1 | Defense-Related Diplomacy | | M1 | Formal Bilateral Military Engagements |
| | D2 | International Military Education and Training | | M2 | Shared Informal/Multilateral Military Engagements |
| | D3 | Soft Power Activities | | M3 | Defense/Security Pacts and Agreements |
| | I1 | Cultural/Media Outreach, Collaboration, Alignment | | E1 | Arms Transfers |
| | I2 | Information/Communications Technology Support | | E2 | Technology-Sharing, Joint Production Agreements |
| | I3 | Cooperation in Military Intelligence/Communications | | E3 | Trade/Cooperation in Strategic Commodities/Sectors |

| CURRENT DEGREE OF INFLUENCE | | | | | | PROJECTED FUTURE DEGREE OF INFLUENCE | | |
|-----------------------------|------|--------|-----|----------|-----------------|--------------------------------------|--------|------------|
| Very High | High | Medium | Low | Very Low | None/Unobserved | Increasing | Steady | Decreasing |

INTRODUCTION TO CHINA-CHILE MILITARY RELATIONS

Chile was the first South American country to establish diplomatic relations with China in 1970 when Salvador Allende was in power.¹² When General Augusto Pinochet ousted Allende in 1970 to become Chile's leader, these countries maintained friendly relations well into the 1990s. Both Allende and Pinochet wanted to expand trading opportunities given their interests in free-market economics, and Pinochet needed foreign partners due to the fallout of his successful coup. Chile became the first Latin American country to recognize China as a market economy and was in favor of granting it accession to the World Trade Organization in 2001.¹³ Chile later signed a free trade agreement with China in 2005, becoming the first country outside Asia to do so.¹⁴ This is the foundation for Chile's relationship

with China, where economic considerations drive the relationship forward. There is a dearth of recent military cooperation between the two countries due to the strong diplomatic and defense relationship Chile has with the United States, but, during the 1990s, Chile undertook many professional military education exchanges with China, routinely sending officers to the mainland.

Fears of a growing economic dependency on China have been palpable in Chile. Santiago sent more than \$36 billion worth of goods (constituting 38 percent of its total) to China in 2021.¹⁵ Chile depends on the Chinese market for sending one of its most important resources, copper, making up about 84 percent of Chile's exports to China.¹⁶ Chile accounts for 28

CHILE AT A GLANCE

| | |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capital | Santiago ²¹ |
| Population | 18,549,457 ²² |
| GDP per Capita | \$25,400 ²³ |
| Head of Government | President Gabriel Boric ²⁴ |
| Head of State | President Gabriel Boric ²⁵ |
| Minister of Defense | Maya Fernández Allende ²⁶ |
| Chief of General Staff | Jean Pierre Desgroux Ycaza ²⁷ |
| Military Expenditure (total) | \$5.74 billion ²⁸ |
| Military Expenditure (% of GDP) | 1.6% ²⁹ |
| Armed Service Branches | Armed Forces of Chile (Fuerzas Armadas de Chile): Chilean Army (Ejército de Chile), Chilean Navy (Armada de Chile, includes marine units and coast guard or Maritime Territory and Merchant Marine Directorate (Directemar)), Chilean Air Force (Fuerza Aerea de Chile) ³⁰ |
| Active Armed Forces Personnel | 80,000 active armed forces personnel (45,000 Army; 25,000 Navy; 10,000 Air Force); approximately 50,000 Carabineros ³¹ (2023) ³² |

percent of global copper production.¹⁷ In 2022, China imported \$7.72 billion in lithium carbonates from Chile, making it the top destination for the valuable resource.¹⁸ Chile produces lithium brine before exporting it as lithium carbonate, a critical component in the lithium-ion battery industry.¹⁹ Given the United States' close defense and security relationship with Chile, Chinese demand for lithium carbonates looms large over U.S.-Chilean relations, especially as China seeks to maintain its dominance in the electric vehicle market by procuring the critical resource from Chile. While the United States aims to produce more

lithium domestically over the next few years, it seeks more opportunities to expand the lithium trade with Chile.²⁰ Chile has successfully bifurcated its economic and security interests by having strong relations with both China and the United States. But as the competition for strategic resources like lithium and copper increases and China's economic grip on Latin America tightens, how Chile balances these interests is likely to increasingly challenge the U.S.-Chile relationship.

D - Diplomatic Instruments

China and Chile have minimal diplomatic-military relations, with the foundation of their relationship being economic in nature. Chinese companies and defense contractors have taken an interest in attending Chile's military exhibitions in recent years.



D1: Defense-Related Diplomacy

Current Influence: Low

Projected Influence: Steady

- **Defense-related diplomacy has been minimal compared to economic-related diplomacy and limited by the fact that Chile has vibrant military-diplomatic relations with the United States.**
 - » China and Chile struck a Comprehensive Strategic Partnership in 2016, the highest classification Beijing gives its allies after President Xi Jinping was invited to Chile by then-President Michelle Bachelet.³³
 - » In 2014, then-President Michelle Bachelet visited China for the APEC summit where she noted the importance of the Pacific Alliance; a bilateral meeting between her and Xi also took place.³⁴
 - » That same year, State Councilor and Defense Minister Chang Wanquan met with his Chilean counterpart, Defense Minister Jose Antonio Gomez, in Beijing where both ministers talked about strengthening defense cooperation.³⁵ No actual agreements were struck.
 - » In July 2017, the Commander-in-chief of the Chilean Army visited Beijing to discuss emergency and disaster management with his People's Liberation Army (PLA) counterpart, then-General Li Zuocheng. It was stated that both armies ought to conduct future simulations and training regarding how to employ troops in any catastrophic disaster or emergency.³⁶
 - » In 2019, the Chief of Staff of the Chilean Air Force, Roberto Avendaño, received a visit from Major General Huang Xueping, deputy director of the Office for International Military Cooperation.³⁷ No details about the topics of discussion were given.³⁸
 - » President Sebastián Piñera visited China for a state visit in 2019 where he and Xi Jinping committed to more collaboration in certain areas like 5G technology, space policy, technology, and space electromobility.³⁹
 - » President Gabriel Boric visited China in 2023 to meet with Xi Jinping, where he invited Chinese firms to participate in Chile's lithium industrial and green hydrogen project development.⁴⁰
- **China's influence via this instrument is projected to be steady over the next three years. Security visits will remain limited as Chile chooses to prioritize economic exchanges with China.**
 - » President Boric's visit in late 2023 prioritized Chile's economic relationship with China and his stewardship of the Chilean economy will necessitate continued interaction with Beijing along these lines.
 - » Chile's military-diplomatic relations with the United States show no demonstrable sign of fading. Bilateral staff talks between the two militaries to strengthen interoperability concerning regional challenges signify the robustness of the defense relationship.⁴¹ Seventy-two agreements or engagements were planned for 2022 alone.⁴²



D2: International Military Education and Training

Current Influence: Very Low

Projected Influence: Steady

- **This instrument was considered vibrant during the 1990s but gradually leveled off as Chile's Army continued to professionalize and deepened links with Western militaries, especially the U.S. military.**
 - » In 2012, Chile's Army Comptroller received a delegation from its PLA counterpart, led by Major General Wang She. The two teams discussed the mission, objectives, and social environment of the Army Comptroller.⁴³
 - » Chinese language instructors from the PLA previously taught at the National Academy of Political and Strategic Studies and Army War College but have since stopped.⁴⁴
 - » In 2016, Chilean representatives attended the Great Wall Counter-Terrorism International Forum held in Beijing. However, it is unclear whether these representatives were affiliated with Chile's military.⁴⁵
 - » An official statement from the July 2017 visit to Beijing by the then-Commander-in-chief of the Chilean Army stated that both armies ought to conduct future simulations and training regarding how to employ troops in any catastrophic disaster or emergency.⁴⁶ However, there is no record of specific training that occurred as a result.
 - » In 2018, Chile's 3rd Mountain Detachment "Yungay" received a PLA delegation headed by the Chief of Staff of the Western Theater Command, Lt. Gen. Rong Guiqing and accompanied by a Chinese embassy Defense Attache.⁴⁷ During the engagement the PLA toured with the Yungay detachment, studied the characteristics

of deploying mountain troops, and attended an exhibition regarding military rescue patrols.

- **The vibrant security relationship between the United States and Chile suggests that China will continue to be limited in its employment of this instrument, which is projected to remain at steady levels over the next three years.**
 - » U.S. Southern Command (SOUTHCOM) has supported the creation of the first designated Sergeant Major of the Army for Chile and supported the first Joint Senior Enlisted meetings in Brazil, Chile, Paraguay, El Salvador, Honduras, Argentina, and the Dominican Republic.⁴⁸



D3: Soft Power Activities

Current Influence: Very Low

Projected Influence: Steady

- **China’s current soft power activities in Chile are limited to trade shows, exhibitions, and military competitions.**
 - » The Army Academy of Artillery and Air Defense of China sent a team of cadets to compete in an International Patrol Competition held in Chile in 2017.⁴⁹
 - » Chinese military companies participated in Chile’s marquee International Air and Space Fair (FIDAE) security exhibitions in 2018.^{50 51} This event occurs every two years and is considered Latin America’s most important security exhibition.
 - » Chinese military defense contractors continue to support the FIDAE-2024 security exhibitions.⁵² These exhibitors are Chinese defense contractors and arms companies, such as Norinco and Shenzhen Skyfend Technology, that specialize in land systems and in anti-unmanned aircraft systems capabilities, respectively.^{53 54}
 - » In 2015, China invested in the San Antonio Pier Expansion project in Chile, which totaled \$44 million, and could theoretically be used for naval purposes.⁵⁵ By comparison, China has invested \$225 million and \$272.5 million in Chile and Mexico, respectively, in ports.
 - » The 2018 EXPONAVAL trade show also featured two Chinese delegations and Chinese arms companies present.⁵⁶
 - » In November 2018, a PLA Navy hospital ship called Peace Ark arrived at the Port of Valparaiso in Chile for its maiden visit⁵⁷ to celebrate the 200th anniversary of Chile’s Navy and the 2018 edition of EXPONAVAL.⁵⁸
 - » In 2019, the PLA Navy icebreaker Xue Long II made its maiden voyage to Antarctica.⁵⁹ Beijing and Santiago have discussed granting the icebreaker access to the Punta Arenas port to resupply China’s Antarctic bases. It is unclear the status of these discussions or whether they have stalled.⁶⁰
- **Military soft power activities between China and Chile are projected to remain steady over the next three years.**
 - » China will continue to participate in Chile’s marquee security exhibitions and Chinese defense contractors will most likely continue to attend military industry conferences and participate in FIDAE and EXPONAVAL exhibitions.

I - Informational Instruments

China uses informational instruments in Chile in a limited way, with a particular emphasis on the media. However, Chinese influence is more impactful as it relates to economic matters and Chilean polling supports this thesis. Nevertheless, Huawei's penetration of the Chilean ICT sector may give China additional tools for gaining informational influence, especially as the 5G telecom industry in Chile matures.



I1: Cultural and Media Outreach, Collaboration, and Alignment

Current Influence: Medium

Projected Influence: Steady

- **China actively uses the Chilean media ecosystem to try to influence Chileans' views regarding Beijing's intentions concerning Chile and the region.**
 - » Xi Jinping visited Chile for the Summit of Leaders in 2016. Xi remarked that China could collaborate with Chile (including the rest of Latin America) in media engagement.⁶¹ Xi proposed to have more Latin American media companies open offices in China to increase the number of journalists present in China.⁶²
 - » The state-run China Media Group and Xinhua, China's official state news agency, offer free content to Chilean media outlets, providing content for ChileCn (a Chinese website that carries Chilean news in Spanish and Mandarin).^{63 64}
- **China has engaged in a sustained cultural influence campaign in Chile.**
 - » In 2018, the University of Tsinghua inaugurated its Latin American Center in Santiago. This institution acts as a "central base for talent cultivation by Tsinghua University, as well as the development of academic research and exchanges in the humanities with Latin American countries."⁶⁵
 - » Including "satellite campuses and classrooms, Chile has a total of 21 Confucius Institute sites across the country (more than any other in the region)" as of 2021.⁶⁶ The institutes provide cheap language training. The Confucius Institute's regional headquarters is in Santiago.⁶⁷
- **Polling and survey data illustrate that Chile may be a relatively favorable environment for China to employ informational instruments.**
 - » 2019-20 polling data shows that 51 percent of Chileans want to deepen trade relations with China compared with 25 percent for the United States.⁶⁸ About 77 percent of Chileans also have a positive impression of China.⁶⁹ A May 2021 survey found that 50 percent of Chileans had a positive view of Chinese companies' investments in Latin America over the last 10 years.⁷⁰ But few Chileans view China as a country to emulate, with many Chileans associating Beijing with many negative descriptors compared to the United States, Japan, or Italy, for example.⁷¹
 - » Another survey, conducted by Latinobarometro in 2022, found that only 14 percent of Chileans had "the best opinion" of China when compared to Russia, Germany, and the United States.⁷²
 - » From 2018 to 2021, an analysis of Chilean op-eds and editorials found that about 61 percent and 49 percent, respectively, presented China as an opportunity from an economic standpoint.⁷³
- **Chile has been relatively resilient in this space with few Chilean media outlets found to be part of the global Chinese media ecosystem. Media outlets publish material critical of China's attempts to influence Chileans.⁷⁴**
 - » Even if China-based companies with CCP ties are present in Chile's print media, their content is not present in "digital television infrastructure" according to the China Index, which monitors Chinese influence in the digital world.⁷⁵
 - » Chinese diplomats have published op-eds in Chilean outlets and given interviews. For example, the Chinese ambassador to Chile, Xu Bu, who left his post late 2020, has responded harshly to any criticism hurled at Beijing, while his successor, Niu Qingbao wrote op-eds regularly in Chilean outlets.⁷⁶
- **China's media influence has its limit.**
 - » No Chilean journalists or organizations are part of the Belt and Road Media Cooperation Alliance even though Chile is part of the Belt and Road Initiative (BRI).⁷⁷
 - » This Alliance is an initiative that creates and supports favorable media coverage of BRI projects across the world with the support of Chinese and member countries' media organizations.
 - » A robust social media presence is lacking; the Chinese embassy's X account (formerly Twitter) had fewer than 2,000 followers as of the end of 2021, with very low engagement from Chileans.⁷⁸

- **China's strategic influence via this instrument is projected to remain steady in the next three years.**
 - » Beijing's inroads in Chile's media ecosystem will allow it to maintain a steady presence into the future.
 - » China will likely continue to purchase informational supplements in Chilean newspapers and will maintain its relationship with Chilean media outlets where it provides content.



I2: Information and Communications Technology (ICT) Support

Current Influence: Low

Projected Influence: Steady

- **China and Chile have collaborated in traditional information and communications technology arena through research and education ventures.**
 - » The China-Chile ICT Joint Laboratory was created in 2019 by Datang Telecom International Technology Co., the Harbin Institute of Technology in China, and the University of Concepcion in Chile.^{79 80} It is a “multilateral education-research-production framework for promoting international technical communications, standardization and industrialization of ICTs between China and Chile.”^{81 82}
- **Huawei, the Chinese telecommunications and ICT giant, has been building data centers in Chile—a critical piece of artificial intelligence (AI) infrastructure.**
 - » As of 2023, Huawei has two data centers located in Chile.⁸³ Data centers are facilities that centralize an organization's IT operations and equipment to store, process, and disseminate data and applications.⁸⁴
 - » Beijing also has a public cloud data storage center devoted to artificial intelligence and big data services in Chile, with more cloud-service data centers expected to come online in the future.^{85 86}
 - » Huawei is also the main hardware supplier to many Chilean telecom companies, WOM, and Movistar (Telefonica); these companies have focused on transitioning to fifth-generation (5G) wireless networks.⁸⁷ WOM, which mostly depends on Huawei equipment, was able to significantly expand its 5G bandwidth spectrum in 2021 due to an auction, giving Huawei a big stake in Chile's 5G future.⁸⁸ Moreover, Huawei is also a big supplier of Claro, another Chilean telecoms provider.^{89 90 91}
 - » China's clout through Huawei in Chile and Latin America remains sizable. According to researcher and academic, Pablo Baisotti, “Huawei has become the Chinese regime's outpost on the digital route and in the limitless expansion of technology, particularly 5G, satellite networks, and fiber optics, particularly in Chile, Peru, and Brazil, which are leading the region in implementing 5G.”⁹²
- **China's economic relationship with Chile via the ICT support instrument means that this commercial aspect will remain viable for several years if not decades.**
 - » A prime example is the guaranteed presence of Huawei in Chile's ICT infrastructure due to its success and lack of alternative telecom providers which empowers Huawei to service Chile's needs in this area.
- **China's cooperation with Chile in the ICT sector is blunted by American engagement, and as such is expected to remain steady over the next three years.**
 - » In 2020, Chile snubbed Huawei in constructing an undersea fiber optic cable for international communications from Chile across the Pacific westward.⁹³ The Humboldt cable project, a joint project with Google, Chile's Desarrollo País, and the Office of Posts and Telecommunications of French Polynesia, will be the first of its kind connecting South America to the Indo-Pacific.⁹⁴ Huawei was the leading contender for the contract but American pressure and lack of commercial viability led to Chile's eventual decision for an alternative.⁹⁵
 - » SOUTHCOM and U.S. Space Command work with the Chilean Air Force to increase space domain awareness and have a pilot program to use a station to help monitor Chilean airspace for space debris and objects.⁹⁶



I3: Cooperation in Military Intelligence and Communications

Current Influence: Very Low

Projected Influence: Steady

- **China provides Chile with surveillance systems and has had a cooperative relationship vis-a-vis space. Although the collaboration is civilian in nature, the space and surveillance technology could have military applications.**
 - » China has provided surveillance systems to Chile. The latter has installed over 700 thermal cameras that use facial recognition technology.⁹⁷ Two Chinese companies—Hikvision and Dahua—also sell surveillance technology to Chile's municipal government.
 - » Regarding space cooperation, the Santiago Satellite Station was sold to the Swedish Space Agency (SSC) in 2008. In 2010, the China Satellite Launch and Tracking Control Center General (CLTC) penned a multiyear agreement with the SSC to access a 10-meter C-band antenna at the site. Further, the SSC website notes that CLTC currently operates two antennas at the station, which satellite imagery suggests are located in

the northwest corner of the site. The civil applications of this are for television broadcasting, but when it comes to military applications, this C-band antenna can be used for surveillance and long-range tracking related to locating weaponry.

- » The Chinese Academy of Sciences has a South American Astronomy Center that was one of the first international research centers funded by the Chinese government in 2013; it is situated in Cerro Calan next to the University of Chile’s Department of Astronomy and National Astronomical Observatory.⁹⁸
- » According to Evan Ellis, a research professor at the U.S. Army War College, China also has a presence in an observatory in Paranal, Chile.⁹⁹ This site is operated by the European Space Organization.
- » China’s efforts in space mostly center on Argentina and Bolivia, having four and three satellite ground stations in those countries, respectively.¹⁰⁰ But Chile’s proximity to Antarctica and historical cooperation with Chile in this domain still interests China, which could take advantage of any opportunity should it present itself.¹⁰¹ According to Evan Ellis, the Chilean base in Antarctica is located not too far from its Chinese counterpart, “providing opportunities for communication and collaboration.”¹⁰² As The Washington Post recently noted, this infrastructure is important for Beijing’s space program in that it allows it to monitor and communicate with its satellite fleet that could be used to surveil targets in the southern hemisphere.¹⁰³
- ***The projected influence for this instrument is not expected to change due to the relationship the United States and Chile have in military intelligence and communications.***
 - » For example, Chile assists the U.S. Joint Interagency Task Force South (a task force within SOUTHCOM) in intelligence gathering and monitoring operations pertaining to illicit trafficking and transnational organized crime.¹⁰⁴
 - » Additionally, “Airmen-to-Airmen Talks” between the Chilean Air Force and U.S. Air Forces Southern/12th Air Force (AFSOUTH)—the Air Force component of SOUTHCOM—are routinely held to share intelligence, among other things, such as humanitarian assistance.¹⁰⁵

M - Military Instruments

Chinese military influence in Chile is very low due to the diplomatic-military influence and security engagement of the U.S. military. The Chilean military is more aligned and influenced by the West and strives to adhere to NATO interoperability in different areas.¹⁰⁶



M1: Formal Bilateral Military Engagements

Current Influence: Very Low

Projected Influence: Decreasing

- **There are no recent formal bilateral military engagements between China and Chile.**
 - » Chile is one of the few Latin American countries that have conducted joint naval training exercises with China in 2013, and no other similar naval activities have been reported between the two countries.^{107,108}
- **Joint military exercises between the United States and Chile have been prioritized.**
 - » Southern Star, a biennial exercise initiated in 2007, brings together U.S. Special Operations Command South, Chile's Army, Navy and Air Force, and Spanish Special Forces to conduct military exercises to strengthen interoperability, coordination, military preparedness, and special operations management.¹⁰⁹
 - » Chile participates in joint military exercises with the United States, South Korea, Japan, and Australia.¹¹⁰
 - » The Chilean Navy has deployed ships to patrol the South China Sea as part of a multinational task force.¹¹¹
 - » Chilean submarines have also been deployed to monitor Chinese fishing vessels for illegal, unreported, and unregulated (IUU) fishing in its exclusive economic zone (EEZ).¹¹²
- **The projected influence for this instrument is decreasing, with no formal engagements between China and Chile since 2013 and the emphasis on formal military engagements with the United States.**



M2: Shared Informal/Multilateral Military Engagements

Current Influence: Very Low

Projected Influence: Steady

- **There is minimal evidence of Chinese engagement using this instrument in recent years.**
 - » China and Chile participated in the U.S.-led Rim of the Pacific Exercise (RIMPAC) in 2014 and 2016. However, this did not entail close cooperation judging by open-source evidence.¹¹³
 - » Chile has participated in 12 of the 26 iterations of the exercise and, since 2012, has begun to take more staff and leadership roles.¹¹⁴
 - » During RIMPAC 2018, a Chilean Commodore served as combined forces maritime component commander—marking for the first time that a non-founding member of the international exercise held this role.¹¹⁵
- **The projected influence for this instrument is expected to remain steady over the next three years. China has lacked in making progress toward more military engagements with Chile.**
 - » It is unlikely that Chile will disregard its acquired responsibilities for future RIMPAC exercises.
 - » United States investment in its military relationship with Chile will sustain more multilateral exercises in the next three years and into the future.



M3: Defense/Security Pacts and Agreements

Current Influence: Unobserved

Projected Influence: Unknown

- **There has been no identifiable open-source evidence of engagement via this instrument since 2012.**
- **Security Pacts and Agreements between China and Chile are expected to remain unobserved in the next three years due to the established relationship between the West and Chile.**
 - » Chile, with many Latin American countries, is a party to the Inter-American Treaty of Reciprocal Assistance or Rio Treaty, a collective security pact meant to assist in the self-defense of its members. This was spearheaded by the United States in 1948.¹¹⁶
 - » Chile and the United States regularly hold the United States-Chile Defense Consultative Committee to discuss security cooperation and defense priorities.¹¹⁷

E - Economic Instruments

China's stake in Chile's lithium industry awards it economic influence as a result of the sizable lithium exports Chile sends to China. The strategic and industrial importance of lithium means that Beijing will continue to reap the benefits of Chile's economic dependence on China.



E1: Arms Transfers

Current Influence: Unobserved

Projected Influence: Unknown

- **Chile has a well-funded military and possesses state-of-the-art equipment dominated by Western and domestic suppliers. China has not made significant inroads using the arms transfer instrument.**
 - » There are no documented arms transfers from China to Chile in the Stockholm International Peace Research Institute (SIPRI) database.¹¹⁸
 - » Chile purchased four DJI Mavic 2 Enterprise Advanced drones in 2021 for the Lautaro Special Operations Brigade through the Chilean company Seges SpA.¹¹⁹ These are mostly used for search and rescue, police missions, or surveying operations.
 - » According to the Observatory of Economic Complexity, spring, air, and gas guns constitute 83.5 percent of the “weapons” China exports to Chile (\$5.68 million); explosive ammunition was about 11 percent (\$767,000); weapons parts and accessories was almost 3 percent (\$195,000); and bladed weapons and accessories was 2.3 percent (\$158,000).¹²⁰
 - » According to the CIA, the Chilean military inventory is primarily composed of Western and domestically produced equipment; it has received weaponry and equipment from the United States, the UK, and Australia.¹²¹
- **China's influence in the next three years via this instrument is expected to remain unobserved. Chile's arms industry is dependent on U.S., UK, and Australian military engagement.**



E2: Technology-Sharing and Joint Production Agreements

Current Influence: Unobserved

Projected Influence: Unknown

- **There has been no identifiable open-source evidence of engagement via this instrument since 2012.**
- **There is evidence of technological collaboration between the United States and Chile. The U.S. Office of Naval Research and its international arm in Santiago support projects throughout Chile and Latin America related to robotics, climate, and polar navigation through grants.**¹²²



E3: Trade and Cooperation in Strategic Commodities/Sectors

Current Influence: Medium

Projected Influence: Increasing

- **China has a medium influence in Chile heavily investing in Chile's strategic commodities sector, specifically the lithium and copper industry both critical commodities in the green energy industry.**
 - » Chile's Atacama salt flat contains about one-third of the world's supply of lithium, a necessary component in EV and cell phone batteries.¹²³
 - » Beijing has made the requisite investments to remain wedded to Chile's lithium market into the foreseeable future.
 - ◊ Tianqi Lithium Corp—a private Chinese mining and manufacturing company based in Sichuan—owns 25.9 percent of SQM (a Chilean company), one of the world's leading lithium producers (the biggest in Latin America).¹²⁴ This makes Tianqi the largest shareholder where it can elect and possibly influence SQM board members.¹²⁵
 - » In 2017, an agreement was struck between China Minmetals Corp., a state-owned company, and Chile's state-owned CODELCO, that gave the Chinese company rights to explore lithium and attain the rights to Chilean mines.¹²⁶
- **The impact of Chile's nationalization of the lithium industry on Chinese investments remains unclear.**
 - » Stakeholders have said it will have no immediate impact.¹²⁷
 - » President Boric stated future lithium contracts would only be dispensed as “public-private partnerships with state control.”¹²⁸
 - » Tianqi Lithium representatives have remarked that it has an interest in working with Chile's new state-run company whenever it is stood up.¹²⁹

Very High

High

Medium

Low

Very Low

Unobserved

- **China is reliant on Chile for copper imports, another strategic resource.**
 - » This critical mineral is used in offshore wind turbines, EVs, and transmission minerals. Its importance will only increase as the green transition continues apace.¹³⁰
 - » According to a CSIS report, Mexico, Peru, and Chile hold approximately 40 percent of the earth’s copper reserves.¹³¹ It states that “critical minerals will be one of the economically impactful industries of the future as the world decarbonizes, and given Latin America’s natural resource endowment, it will be at the center of this industry.”
 - » Chile is China’s largest supplier of copper—integral for making solar panels and wind turbines, making Chile an important partner for China’s EV dominance.¹³²
- **China’s influence regarding this instrument will continue to slowly increase over the next three years with one caveat being the uncertainty of how Chile’s nationalization of its lithium industry will impact this instrument.**
 - » China recently struck an agreement with Chile to build a plant in the country to produce lithium iron phosphate (LFP) a critical component for EV battery production.
 - » Tsingshan Holding Group will invest \$233.2 million in a Chilean plant to produce LFP.¹³³ This is due to be operational in 2025 with an ability to produce 120,000 tons of LFP.¹³⁴
 - » Given China’s dominance in the EV industry, this relationship could provide China greater economic influence in Chile.
 - » Tsingshan, even though it is a private company, appears to stay in sync with China’s “national strategy” and in the “structural transformation” of its economy.¹³⁵

CONCLUSIONS

China's current M-DIME influence in Chile is assessed as Very Low. China's economic, informational, and telecommunications outreach toward Chile grants grants tangible, if minimal, influence over one of the most dynamic economies in Latin America. In the information sector (I1), the possibility of Huawei carrying out espionage activities through its network remains, although no evidence of malicious activity has been found in open-source research. If exercised, regional electrical grids and even nuclear arsenal communications in the United States could be impacted.¹³⁶ China's vibrant interest in Chile's strategic commodities sector (E3), specifically the copper and lithium industry, incentivizes it to maintain strong economic relations with Santiago. Engagement in the strategic commodities sector (E3) has been vibrant. Lithium (E3) as a strategic resource is conducive to China's economic future and has many military applications that the PLA has researched, but will have no immediate impact in the next three years. Nonetheless, the military aspects of these influences or instruments appear to be small compared to the robustness of security cooperation between the United States and Chile.

Overall, China's projected M-DIME influence in Chile is assessed as Steady. China's projected influence in Chile will increasingly focus on the economic instrument over the next three years. Chile's dependence on China for its economic well-being has not translated into military influence.¹³⁷ China is projected to remain Chile's largest trading partner "and principal buyer of Chilean products..." but ideologically will remain aligned with the United States regarding security challenges because its military is institutionally supported by the United States and the West.¹³⁸ China's increasing stock in Chile's lithium industry (E3) is conducive to China's economic future and has many military applications that the PLA has researched, but will have no immediate impact in the next three years,¹³⁹ even as Chile welcomes China's investments in this sector. The security-centric role of the United States has persuaded Santiago to decouple Beijing's economic niceties from its defense and security commitments.¹⁴⁰ It is in Chile's national interest to continue engaging China economically while remaining committed to its defense partnership with the United States.

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