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African military aircraft procurement from China: A case study from Zambia

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Logics of Arms Deals: Multilevel Evidence from China-Zambia Relations

Jyhjong Hwang

NO. 37 | MAY 2020:

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ABSTRACT

**SAIS-CARI WORKING PAPER
NO. 37 | MAY 2020:**

“Logics of Arms Deals:
Multilevel Evidence from
China-Zambia Relations”

by Jyhjong Hwang

WHY DO DEVELOPING COUNTRIES WANT TO EXPAND their air force and why would Chinese arms suppliers be preferred? This paper provides a multifaceted answer based on field interviews in Zambia as well as desk research, developing five different logics for burgeoning arms trade between developing countries and new arms suppliers in the international market. Military and bilateral relations history, current strategic concerns in defense and finance, domestic political economy, psychological quest for prestige, and systemic concerns are all essential factors. A uni-dimensional explanation would lead to skewed or even erroneous interpretations of the intentions of both arms buyers and arms sellers. This paper demonstrates that a comprehensive interpretation of a political phenomenon can and must cover multiple levels of analysis, ranging vertically from subnational dynamics to international dynamics, with agents at different levels interacting with each other (states, multilaterals, corporations, etc.).

INTRODUCTION

ON A SUNNY SATURDAY IN OCTOBER 2015, THE CITY AIRPORT of Lusaka teemed with civilians. The Zambian Air Force (ZAF) headquarters in the capital was hosting an Open Day. In addition to jumping castles for the kids and military job talks, the public could see and even board the aircrafts parked on the tarmac. Even though all the aircrafts were painted with Zambian flags or camouflage, there was no mistaking their origins: the Xian MA60 airliner, Harbin Z-9 military helicopters, and Hongdu JL-8 dual-purpose trainer-light attack jets, were all produced by the Chinese state-owned aerospace and defense giant, Aviation Industry Corporation of China (AVIC).¹ Since the 2000s, when the ZAF ordered up to 49 different aircrafts ranging from training jets to passenger jets, the ZAF has been embarking on an aircraft expansion. AVIC supplied the bulk of these orders, and, given their aircrafts' dominant presence during airshows, AVIC's aircrafts were considered points of pride for the ZAF.

Between 2000 and 2017, the Chinese government, banks, and contractors extended a total of US\$ 143 billion in loans to African governments and their state-owned enterprises.² While the bulk of funding went towards infrastructure projects such as roads and power plants, US\$ 1.5 billion funded military equipment procurement. Lenders included the national policy bank, the Export-Import Bank of China (Eximbank), and Chinese companies such as AVIC and Poly Technologies. Surprisingly, about 40 percent (US\$ 600 million) of these loans went to Zambia, a nation with an approximately US\$ 220 million yearly defense budget.³ As the top recipient of Chinese military procurement loans, Zambia is a landlocked country in southern Africa that suffers neither from war nor civil unrest (e.g. Democratic Republic of Congo, Sudan) and is not a geostrategic hotspot for world superpowers (e.g. Djibouti). How could this phenomenon be explained?

Chinese arms sales to Africa is a topic that often attracts knee-jerk reactions or throwaway explanations, including attributing them solely to corruption or natural resource control. However, such unproven attributions obscure important strategic insights. This paper provides an evidence-based investigation based on two rounds of elite interviews in Lusaka in June and December of 2019, complemented by desk research in both English and Chinese.

Rather than focusing on US or Chinese perspectives, this study takes the point of the view of the purchaser, Zambia. The Zambian perspective challenges the longstanding practice in international relations literature that focuses on the actions and preferences of superpowers at the expense of smaller actors in the system. Such practices ignore the array and complexity of strategies adopted by these smaller actors, which, considering that most actors in the international system are not hegemons, constitute a significant bulk of the strategizing that takes place in the system.

Situated in Zambia and looking out, this paper asks two questions: 1) why does a country like Zambia want to expand its air force, and 2) why does Zambia want to purchase Chinese military aircrafts specifically? I argue that these two questions must be understood through five different logics: historical, strategic, domestic political economy, psychological, and systemic. These logics interlock to provide a more complete explanation of the arms purchasing choices developing countries face, as

well as the broader issue of how the military's domestic interests can manifest as foreign relations actions. Methodologically, this paper also demonstrates that when seeking to interpret new phenomenon in the international system, restricting the analysis to a single level is neither desirable nor necessary. The paper will conclude by providing policy-relevant observations.

BACKGROUND

THE PUZZLE: AIR FORCE EXPANSION WITH A CHINESE BOOST?

THE OFFICIAL EXPLANATION FOR ZAMBIA'S RECENT air force expansion was the need to replace the aging fleet acquired back in the 1970s, particularly in order to improve their transport capabilities. The former ZAF commander, Lieutenant General Eric Chimese, highlighted the importance of transport capability to governance:

Modernization of our air fleet is an ongoing process that should be able to provide us with an increasing capability to respond to the air power needs of our country within the context of our internal security requirements and the regional and global dynamics [...] The Zambia Air Force has ensured that it retains the reach to the remotest parts of the country and the capacity to transport government officials anywhere, any time. This has helped to ensure that no population feels isolated from its government. There are no 'ungoverned spaces' in Zambia.⁴

Chimese' statement indicates that the air force expansion is as much about defense as it is internal governance. It is also a policy choice that necessarily puts pressure on other government budget items; as President Edgar Lungu admits, the "acquisition of new equipment is a long-term investment and a great cost to [his] government and the people of Zambia."⁵

Among the extensive aircraft orders from a range of suppliers since 2000, Chinese aircrafts featured prominently not only in terms of number and variety, but also in the availability of loan financing that is unmatched by Italian or Russian suppliers (Tables 1 and 2). Every aircraft purchase from China received some form of financial support, either in the form of Eximbank loans, or AVIC's supplier's credit. Supplier's credit allows customers to receive goods or services with delayed payment at a later date, instead of a lumpsum payment upfront. While such supplier's credit is initiated by AVIC with the primary intention of increasing sales, the availability of Eximbank loans involve more political factors. As a policy bank, Eximbank's mandate is to advance China's strategic interest by promoting Chinese foreign investment abroad as well as international cooperation.⁶

Table 1: Zambian Air Force Inventory, 2019⁷

Role	Model	Active Units	Origin
Combat Aircraft	J-6	8	China
	MiG-21	10	Russia
Transport	C-27J	2	Italy
	MA60	1	China
	Y-12	8	China
Combat Helicopter	Bell 205	12	US license to Italy
	Bell 206	2	US license to Italy
	Bell 212	1	US license to Italy
	Mi-171	5	Russia
	Z-9	7	China
Training Aircraft/Helicopters	J-6	2	China
	K-8	16	China
	L-15	6	China
	MFI-15	15	Sweden
	SF-260	13	Italy
Total Units	108		
Total Chinese Units	48 (44%)		

The availability of financing options makes for an attractive, if simplistic, answer to the puzzle of why Zambia is heavily reliant on China for the expansion of their air force. However, such a functionalist explanation risks missing other factors. Eximbank does not offer loans to every country or for every project. The availability of Eximbank loans along with Zambia's choice of supplier are both heavily influenced by Zambia's bilateral history with China, as well as the ZAF's experience since independence and during the Rhodesian Bush War.

Table 2: ZAF's Aircraft Orders Since 2000⁸

Year	Aircraft	Role	Supplier	Country	No. Units
2005	MA60	Airliner	AVIC	China	2
2006	Y-12	Light transport	AVIC	China	5
2006	UH-1H ⁹	Utility helicopter	Augusta	Italy	3
2010	Hongdu JL-8	Trainer/light attack	AVIC	China	8
2011	Z-9 ¹⁰	Military utility helicopter	AVIC	China	7
2011	SF-260TP	Trainer/light attack	Alenia Aermacchi	Italy	6
2014	Mi-8MT/Mi-17	Transport/armed helicopter	Mil Moscow Helicopter	Russia	2
2014	L-15	Supersonic trainer	AVIC	China	6
2014	SF-260TP	Trainer/light attack	Alenia Aermacchi	Italy	6
2015	C-27J Spartan	Transport	Leonardo S.p.A.	Italy	2
2017	Sukhoi Superjet 100	Business jet	Sukhoi	Russia	1
2017	Gulfstream G650	Business jet	ExecuJet (Swiss)	US	1

LOGIC 1 HISTORIC

POST-COLONIAL EXPERIENCE AND THE NONALIGNED MOVEMENT

ZAMBIA, FORMERLY NORTHERN RHODESIA, ACHIEVED independence in 1964 but maintained close ties with the United Kingdom. However, the relationship deteriorated after the Unilateral Declaration of Independence (UDI) by Southern Rhodesia's white minority, present day Zimbabwe. The Zambian government called for UK intervention not only because the UDI was seen as a betrayal of the black majority, but also because it raised a threat of invasion. Zambia had provided safe-haven to the black-led nationalist movements, Zimbabwe People's Revolutionary Army (ZIPRA), and the Zimbabwe African National Liberation Army (ZANLA), both of whom sought to wrest power from the Rhodesian government led by Ian Smith.¹¹ However, the U.K. dragged their feet, partly due to concerns that pitting British troops against white Rhodesian troops would be considered fratricide. Instead, the U.K. responded conservatively by sending 10 Javelin jets to protect Zambian airspace.¹² However, the "Javelin pilots had neither the capability nor intention to attack Rhodesia." Furthermore, the British troops stationed on the Zambia-Zimbabwe border were friendly with Smith's troops and on more than one occasion RAF technicians defected to British bases.¹³ The U.K.

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generated further resentment in Zambia when they intervened quickly in the black-led rebellion in the Caribbean. Zambian leadership interpreted the decision to intervene as one driven by racism. For Zambian leaders, “British failure to use military force to crush UDI and their subsequent deployment of the relatively worthless Javelin squadron posed grave threats to Zambia’s national security.”¹⁴ During the 1978 Rhodesian assault on ZIPRA, the “Rhodesian Air Force took control of Zambia air space for 48 hours (19 October) while the Zambian Air Force prudently obeyed the broadcast advice of the Rhodesian forward controller and stayed grounded.”¹⁵

Meanwhile, Zambia was also threatened with an embargo from Rhodesia. At the time, Zambia relied on coal deliveries and oil pipelines from Rhodesia. Zambia also transported 95 percent of its primary export, copper, to Rhodesia via the Victoria Falls Bridge on board Rhodesia Railways. Rhodesian sanctions choked off Zambia’s economic lifeline. This led to the joint Anglo-American airlift that flew in barrels of oil from Dar es Salaam in Tanzania, with US involvement driven mostly by their interest in Zambian copper exports.¹⁶ These airlifts were only a partial solution to Zambia’s energy problems and their ability to mine and export copper. President Kaunda stated that, “until such time as alternative land routes can be found and supplies are able to reach this country in sufficient quantities, considerable amount of oil supplies have to be flown in by air.”¹⁷ The embargo not only obliged Zambia to seek Western support, but also pushed Kaunda into the uncomfortable situation whereby he had to ask Portuguese-governed Mozambique - a regime that Kaunda perceived as a remnant of colonial power - for airlift permission from the Port of Beira.¹⁸ The combination of the embargo and air space incursions, which forced Zambia to ask for Western support or concede defeat, were humiliating enough to convince Zambian leadership that an air force with reliable defense and transport capabilities were (and continue to be) crucial to the nation’s sovereignty, a particularly salient ideology in post-colonial Africa.

The embargo coincided with the warming of China-Zambia relations. As the airlifts had limited Zambia’s transport capacity, Kaunda, “wanted a new railroad running to Dar es Salaam, but the British, American, and Soviet governments refused to fund the project [...] In July 1967 [Kaunda] spent five days in China, and the government there agreed to build the railroad.”¹⁹ During a time when relations with the US and the Soviets were worsening, with various requests for support rebuffed, China stood out as a potential ally for Zambia. When the former Prime Minister of Zambia, Elijah Mudenda, was asked why China was so helpful, Mudenda simply replied, “I think the Chinese are very human.”²⁰ The reasons that drove China to offer such support are myriad, however, and beyond the scope of this paper. Suffice it to say that the decision was likely driven by a combination of ideological affinity for revolutionary movements, an attempt to cement an influential position within the Nonaligned Movement, and a burgeoning desire to create a sphere of influence abroad. Regardless of their intentions, China’s support came at a time when assistance from the US and the Soviet Union was lacking. Chinese support left a very positive impression on Zambian leadership that would persist for decades to come.

LOGIC 2 STRATEGIC

BORDER SECURITY ON A BUDGET

ZAMBIA'S CURRENT SECURITY CONCERNS CENTER AROUND the nation's landlocked geography. Zambia shares its 5,369 km border with seven countries: Angola, Botswana, the DRC, Malawi, Mozambique, Tanzania, Namibia, and Zimbabwe. For the past 20 years, Zambia's primary security concern has been the instability along the Zambia-DRC border, particularly spillovers from the DRC's civil unrest and illegal border crossings. Between 1998 and 2003, Zambia received upwards of 60,000 Congolese refugees and soldiers fleeing from the Second Congo War.²¹

Even after the end of Congolese civil unrest, the concern over border security has continued. In December 2011, Zambian immigration officials expressed concern that the DRC had "encroached on Zambia's no-man's land" and went on to explain that with DRC officials patrolling the area, the DRC had the potential to gain control of Zambia's no-man's land.²² Zambia's concern also manifested in their repeated request for military training from abroad. In February 2008, the US Coast Guard International Training Division provided courses to Zambia upon request by the Zambian government. The course taught, "port security and counter-terrorism tactics to approximately two dozen Zambian military personnel, police and security forces."²³ US official sources emphasized that, despite being a landlocked country, border crossings on Lake Tanganyika were a serious concern.²⁴ In July 2015, Zambia launched a special forces marine unit to improve border security and illegal fishing, particularly along the Luapula River, which borders the DRC, and Lake Mweru Wantipa. In November of the same year, President Lungu met with the US Secretary of the Navy, Ray Mabus, to request training support. It is unclear whether this request for training ultimately materialized, but such military trainings are common. The US Africa Command (AFRICOM) stated that the US Coast Guard training "was part of an ongoing series of military-to-military programs coordinated through the U.S. Embassy."²⁵

This evidence shows that Zambia's air force expansion is a response to recent destabilizing effects of neighboring state's domestic unrest. Zambia chose to meet this security need with a build-up of military hardware, among other policies. For air forces, transport aircrafts (cargo planes and airliners) and training aircrafts (that help produce pilots) have high strategic utility. It is this very utility which justifies their purchase, regardless of their origins.²⁶ Broadly speaking, airlift capabilities are an important strategic priority for African air forces. In an article published by the US Army, Major Jeffrey N. Krulick stated that, "Africa's austere environment presents difficult logistics challenges. Limited transportation infrastructure requires that airlift be present to augment ground and sea transportation assets responding to crises and conflict situations."²⁷ The Africa Center of Strategic Studies (ACSS) argued a similar point, "While commonly viewed as too expensive, airlift assets provide vital capabilities and multiply the effectiveness of Africa's resource-limited militaries and collective peace operations." ACSS was referring specifically to war-torn areas like Sudan and the DRC, where, "poor roads and rugged terrain make convoys slow, ineffective, and vulnerable to landmines or ambush."²⁸ However, even countries at

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peace face daunting ground transportation challenges. A 2017 World Bank report put Zambia's road density at 9.1 kilometer per 100 square kilometers, which is quite low compared to sub-Saharan Africa's (SSA) average of 14.9.²⁹ The rainy season is particularly daunting, as roads and bridges are commonly washed away.³⁰

However, were the purchases "strategic" in the sense that there was something inherently more desirable in aircrafts made in China that met Zambia's needs? In an interview with the People's Liberation Army media center, Chinese essentially said they chose the L-15 over Russian and Italian models due to the availability of financing support and low maintenance costs.³¹ Can these claims be corroborated by the actual costs of the aircrafts? Richard Bitzinger, a Rand Corporation Defense Analyst, argued in his 1991 report that Chinese weapons exports had several advantages over traditional western suppliers. They tended to be, "rugged, simple to operate and maintain, and fairly reliable [...]. Most Chinese weapon systems are also compatible with Soviet equipment, making them additionally appealing to Third World countries that already have considerable amounts of Soviet equipment in their inventories."³²

While "ruggedness" and "reliability" of aircrafts are hard to measure because those factors are influenced by maintenance, use, and local conditions, compatibility with existing weapons can be an indication of ease of operation. The compatibility argument has some historic merit. During the Cold War when Egypt was playing the US against the Soviets for support, President Gamal Abdel Nasser preferred US arms, "as they would be more compatible with the largely British weaponry the Egyptians possessed."³³ However, Bitzinger did not provide direct comparisons between Chinese aircrafts and other potential suppliers and Chinese military aircrafts have since developed beyond those discussed in Bitzinger's 1991 report. Moreover, did Zambia even own "considerable amounts of Soviet equipment" prior to purchasing Chinese aircrafts to justify the Soviet-lineage advantage argument?

In a detailed inventory of African air forces published in 1999, Winston Brent provided a list of all military aircrafts reportedly owned by each air force, and, when available, the date when the aircraft was damaged beyond reasonable cost of repair (i.e. written-off). Up until publication in 1999, ZAF aircrafts still in service were chiefly trainers from a mix of suppliers: Italian-made trainers SIAI-Marchetti SF260 (20 units) and Aermacchi MB-326 (23); Yugoslav-made trainers Soko Jastreb (18) and Soko Galeb (15); Swedish Saab MFI-15 Safari (17+); and 12 Chinese trainer Shenyang BT-6's delivered in 1978.³⁴ However, most reports on the BT-6s' transfer from Zambia identified them as gifts from the Chinese government, not a specific order from Zambia. If compatibility is a concern for the ZAF, any additional trainers the ZAF purchased should have logically been Italian. Similarly, among other ZAF aircrafts - including helicopters, airliners, and utility aircrafts - there is no clear continuity between the origins of past aircrafts leading to recent purchases of Chinese aircrafts.³⁵

If ease of use, measured by compatibility based on manufacturer's origins, is a not a concern, was low cost the driver behind choosing Chinese aircrafts? There are two approaches to answer this question: first, for aircrafts offered by the Chinese supplier, was Zambia able to buy them at a good price? Second, among aircrafts of comparable

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utility, were the Chinese aircrafts cheaper in comparison? It appears that the price at which Zambia was able to buy the MA60s and Y-12s from China was favorable, even without any financing support. The procurement contract for a package deal of two MA60s and twelve Y-12s was US\$ 56 million. While no breakdown on individual costs were published, using even the lowest prices offered on both aircrafts by AVIC to other buyers puts the contract cost at around US\$ 62 million, suggesting that a US\$ 56 million contract is a very competitive offer (see Appendices A and B). An argument might be made that since these contracts were ultimately loan-financed, the price cut might be recuperated through interest collection. However, the success of such a cost-recovery arrangement is contingent upon the credit worthiness of the borrower. Considering that Zambia's sovereign bond credit rating has been ranked consistently low by multiple credit rating agencies, it is unlikely that this was the reason loan financing was offered.³⁶

The prices of the JL-8 trainers that Zambia purchased in 2012 were also competitive, at US\$ 8.3 million (unadjusted) per unit compared to the US\$ 9.7 million per unit that Bolivia paid in 2009 and the US\$ 12.5 million per unit that Zimbabwe paid in 2006. Though Egypt was able to acquire these at an even lower price of \$5.8M per unit in 1999, this was for a much larger 60 jet order. The JL-8s were also discounted compared to an aircraft of similar configuration that Zambia might have considered in 2012, the Yak-130. The Russian Yak-130 sells for US\$ 12-15 million, going up to US\$ 30 million including spare parts, equipment, and other services. In other words, Zambia appears to have had good financial reasons to opt for the JL-8 over other aircrafts.

The price for the Z-9 helicopters was also fairly standard compared to other Z-9 deals, falling between US\$ 13-15 million each, depending on what percentage Chinese loan financing covered out of the total contract. It is more difficult to compare the Z-9's price with other helicopters, since the Z-9 has a capacity that falls in-between helicopters of similar utility. Considering the helicopters already owned by the ZAF, the AgustaWestland AW139 is the most reasonable choice after the Z-9, although it has a larger 15-passenger capacity compared to the Z-9's 10-passenger, the AW139 goes for US\$ 17-20 million each. Overall, Zambia's Z-9 price does not appear to be alarmingly high nor low.

In comparison to airliners, cargo planes, and dual-purpose subsonic trainers, the L-15 supersonic trainers would be harder to justify for purely strategic reasons. Zambia purchased six L-15s in 2015 for about US\$ 35 million each. It is difficult to tell whether this is a competitive price, since the L-15 is a new model with its first flight in 2006, and Zambia was the first country to purchase them. There are rumors of Venezuelan and Uruguayan orders, but no information is available on prices.³⁷ The world market for supersonic trainers is quite small compared to utility or subsonic trainer aircrafts. The only comparable aircraft that Zambia might have considered during this time would have been the South Korean KAI-T-50 Golden Eagle, which ranges in price from US\$ 28-49 million per unit depending on specifications and how comprehensive the supplementary package is. Since AVIC also built a flight simulator center for L-15 pilots in training, the US\$ 35 million per unit likely included a large supplementary package.³⁸

LOGIC 3 POLITICAL ECONOMY

In terms of strict price consideration, L-15 is a competitive choice.³⁹ However, whether Zambia's strategic interests require supersonic jets to protect their air space is debatable. The drivers for purchasing supersonic jets are better explained by psychological factors discussed later in this paper.

Overall, the function and prices of most of the military aircrafts ordered by Zambia map fairly well onto the strategic logic, both in terms of defensive capabilities and competitive pricing. Adding reasonable financing options into the calculation, it is easy to see why Zambia would favor Chinese suppliers. However, there is more to aircraft procurement than strategic and financial concerns.

DOMESTIC INTERESTS AND STATE-BUSINESS RELATIONS

THE THIRD LOGIC BEHIND ZAMBIA'S AIR FORCE expansion and its choice of Chinese suppliers is Zambia's domestic political economy. This section will investigate the ZAF's many roles within Zambia's economy and society, the corruption charges levied against it, AVIC's long and complex history in Zambia, and the impact of rising anti-Chinese sentiment.

ZAFs MULTIPLE ROLES: EMPLOYER, PROPERTY DEVELOPER, AND NATIONAL AIRLINE

THE ZAF PLAYS MULTIPLE ROLES WITHIN ZAMBIAN society, some of which are not commonly associated with air forces elsewhere. The ZAF is a major provider for formal waged employment, a housing provider, a property developer, and the national airline operator. These multiple roles indicate that the ZAF has an oversized impact on Zambians' daily lives, particularly for those close to the capital.

The ZAF, along with the Zambian Army and the Zambia National Service, make up the Zambian Defence Force (ZDF).⁴⁰ The ZDF employs 15,100 active duty personnel, 1,600 of whom are in the air force.⁴¹ This makes the ZDF, along with the Zambian Police Force, one of the largest formal employers in Zambia. The World Bank's 2010 data for Zambia showed that roughly half of formal workers operate in the public sector.⁴² Positions in the ZDF are highly sought after due to competitive wages. The World Bank's 2017 Job Diagnostic for Zambia observed that public sector jobs pay more than private sector jobs, and thus absorb a large and increasing portion of skilled labor.⁴³ The author's interview with an individual with personal experience in the ZDF employment process revealed that in the 2006 round of ZAF recruitment only 380 out of 1,500 applicants were accepted into the Air Force.⁴⁴ The interviewee also explained that applicants are only eligible upon completion of Grade 12. Applicants included university graduates who faced a difficult job market after graduation. Given that the average level of schooling in Zambia in 2018 was only 7.1 years, the requirement of Grade 12 completion is very demanding.⁴⁵ In addition to competitive wages, some ZDF personnel are also provided with public housing. In 2012, 1,100 units of air force

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housing were commissioned in Lusaka, and in 2014 an additional 3,500 units of army housing were commissioned. According to the author's interviews, these units were also reportedly built by Chinese contractors.⁴⁶

The ZAF also staffs the flag carrier, Zambian Airways. Zambian Airways was originally established in 1964 and operated mainly, "unprofitable domestic routes."⁴⁷ In 1967, operations were handed to the Italian Alitalia, but the airline remained unprofitable. Upon its liquidation in December 1994, the company was US\$ 100 million in debt and aircrafts were seized by stakeholders as they landed in international airports.⁴⁸ Throughout Zambian Airways' lifespan, its pilots and engineers were sourced from the ZAF, with pilots flying both fighter jets and commercial airliners.⁴⁹ Part of Zambian Airways' financial difficulty stemmed from corruption, with both government and Zambian Airways personnel frequently requesting free flights. After Zambian Airways folded, government officials faced limited transportation options even for legitimate government business. Former Bank of Zambia President, Dr. Caleb Fundanga, notes that currently in Zambia government personnel on official business can occasionally use ZAF aircrafts for domestic travel, but most officials must take commercial airlines for international flights.⁵⁰

In August 2018, Ethiopian Airlines released a statement announcing plans to revive Zambia's national airline. According to the official press release, the Zambian state-owned development agency Industrial Development Corporation (IDC) and Ethiopian Airlines planned to jointly establish a new Zambian national airline, with IDC holding 55 percent equity and Ethiopian Airlines holding 45 percent. The initial investment was set at US\$ 30 million.⁵¹ The original goal was to launch the airline in October 2018, but the project has faced multiple delays due to financial constraints and questions about the project's financial sustainability.⁵² The most recent launch deadline was set in the third quarter of 2019, but there has been no further news on this project as of January 2020.⁵³ Interviews with people familiar with the situation indicate that should plans proceed, the national airline will once again be staffed by ZAF pilots.⁵⁴

Apart from national pride, re-launching the national airline may also be a way to generate profits. Profit generation is one of the drivers for ZAF's involvement in a multipurpose property development project in Lusaka. Kingsland City Park is a public-private partnership (PPP) between the ZAF and the Chinese company, Sun Share Group. Sun Share Group's official website states that the development project will include 3,000 high-end housing units, a shopping mall, a natural park, schools, and sports facilities. The project first gained attention in August 2017 during the annual Agricultural and Commercial Show, where Sun Share Group participated as an exhibitor.⁵⁵ The project covers 2,718 acres off Twin Palm Road in southern Lusaka. The state-owned media identified three developers in the PPP: Datong Construction, Drimtown Investments, and Shangria Investments. It was also announced that each of these companies were granted facility concessions ranging from 20 to 28 years, suggesting that the investors would operate the projects and recuperate their investment before handing ownership back to the ZAF.⁵⁶

The investment from Sun Share Group is reported to be US\$ 140 million.⁵⁷ Sun Share Group's press release in August 2017 advertised that housing units would be available for purchase by May 2018. The 1,100 units of ZAF housing that were completed in 2014 appear to be part of an earlier phase of this same project, and the housing units are now inhabited.⁵⁸ The project became increasingly controversial upon occupation with complaints of sewage runoff into a major watershed that feeds the Lusaka aquifers, as well as accusations of high-level officials benefiting from the deal.⁵⁹ Moreover, the project is located in a forest reserve that the ZAF gained access to in order to participate in the PPP. This reserve's protected status was subsequently partially removed in 2015 to make it available for development.⁶⁰ In April 2019, the Lusaka High Court granted an injunction on the project, a decision PPP participants subsequently protested against.⁶¹ As of December 2019, the lawsuit was still ongoing.⁶² Adjacent to Kingsland City, another ZAF housing project, Green City Village, is also planned on a piece of deregulated forest reserve, although the project has been similarly stymied by lawsuits.⁶³ When the author visited the Kingsland City construction site in December 2019, the area had been fenced off and the entranceway built. Preliminary construction on the workers' residence and project office looked to be complete; however, the general area still appeared to be relatively densely forested behind the gate.⁶⁴

CORRUPTION CONCERNS

KINGSLAND CITY INDICATES THAT THE ZAF IS NOT ONLY a defense force but also that it has enough sway within both the government and business communities to participate in development projects. Former ZAF commander Chimese emphasized that the project is not only self-sustainable, but also supports the ZAF budget. Referring to the Town Center of Lusaka, he stated:



Photo credit: Jyhjong Hwang



Photo credit: Jyhjong Hwang

No money, no loan or no funding will be required from the Government or from the Air Force for the development and construction of Kingsland City. We are demonstrating that we cannot just be cry-babies but supplement Government's efforts. Instead of crying with a list of problems, we want to provide solutions and we have begun doing so by going into PPP using land as equity. Security is necessary for commerce. But you cannot get jets or spares for planes on Cha-cha-cha Road. You need money...⁶⁵

Zambia's state-owned news outlet also described the "immediate benefits" of the Twin Palms PPP project as the, "ownership of quality infrastructure to give the Air Force the capacity to raise [its] own financial resources, and take care of the ZAF routine financial requirements from the intended facilities."⁶⁶ The same article emphasized that ZAF's participation in these PPPs was driven by a desire to generate its own revenue and reduce dependency on the treasury.

Chimese himself was removed in July 2018 after being accused of concealing property and was later arrested in February 2019.⁶⁷ Chimese was not the first ZAF commander to be arrested for corruption. Major General Andrew Sakala, ZAF commander from 2010-2011, was sentenced to five years for stealing US\$ 1 million in public funds.⁶⁸ Additionally, Lieutenant General Christopher Singogo, commander from 2002 to 2006, was sentenced to four years in prison on two separate corruption charges.⁶⁹ Considering the string of charges leveled against high-level ZAF leaders, corruption in ZAF's procurements cannot be ruled out.

The concern over procurement corruption is further compounded by the lack of transparency in the military budget. Stockholm International Peace Research Institute observes that,

Even in times of austerity, the Zambian public may perceive the purchases of trainers and cargo planes as legitimate. However, when the public saw government officials were being transported on luxury jets instead of competitively priced airliners, these procurements began to lose legitimacy. Fundanga confirmed that although the purchase of fighter jets were not controversial to the public, presidential jets, which are more visible, were less publicly accepted with debt concerns looming in the background.

Lack of transparency creates high vulnerability for corruption, especially in arms procurement processes. In many countries, the military tends to be one of the most corrupt sectors of government, and arms procurement—domestic and international—is especially subject to corruption, in both developed and developing countries.⁷⁰

Former Director of the Cost of Disarmament Programme at the UN Institute of Disarmament Research, Susan Willet, observed that corruption in sub-Saharan Africa's security sector can often increase and is "proportional to the amount of military expenditure which has gone 'off-budget.'" However, Willet explained that pressure from international donors who refuse to acknowledge the legitimate security needs of developing countries might pressure these countries to resort to off-budget financing.⁷¹

This lack of transparency into military spending is clearly a problem in Zambia. The author's interviews reveal that even though public projects are supposed to be reviewed by the Ministry of National Planning and Development Administration, projects relating to national security are not subject to such oversight. These projects are instead approved directly by the Defence Council, and often receive extrabudgetary funding. Similarly, researchers at the Zambia Institute for Policy Analysis and Research state that Defence Council approvals do not usually come up for debate in the Zambian Parliament. Officials at the Ministry of Finance also state that military aircraft spending is not being reported because they have their own budget. Interestingly, interviewees in the Ministry of Finance specified that, as a rule, public profits go into a consolidated fund that is available for the entire government. This appears to contradict Chimese's statement that the Kingsland City development project's profit could be directly used to fund ZAF procurement, raising further questions about how profits from the PPP will be used.

FISCAL RESPONSIBILITY

THE LACK OF TRANSPARENCY INTO MILITARY SPENDING could potentially compromise Zambia's current effort to head off a debt crisis. The International Monetary Fund's 2019 Article IV Consultation for Zambia reported that, "large fiscal deficits and rising debt service have resulted in domestic expenditure arrears, taking a toll on growth."⁷² Moreover, these deficits were, "financed by nonconcessional debt and the accumulation of domestic arrears [...] deficits have continued to rise following faster-than-budgeted execution of foreign-financed capital spending." Fundanga, former Bank of Zambia President, observed that there will always be budget displacement concerns; for example, whether military spending on "new toys" could be better used in other sectors, such as health and education.⁷³

However, it appears that public perception of aircraft procurement depends on the aircrafts in question. In contrast to the non-transparent procurement process, ZAF is eager to show off their newly procured military aircrafts. The ZAF Open Day is a case in point. On the 2017 Open Day, the new Russian Mi-8s were on display, as well as JL-8s and their accompanying missiles.⁷⁴ In an air show organized by the private Aircraft

With each project AVIC wins, it creates a synergy that increases the likelihood of receiving future contracts. AVIC has carefully cultivated an image as the “go-to” company for a variety of development challenges in Zambia. This relationship was not created overnight but required both a jumpstart from the Chinese government as well as long-term investment from the company itself.

Owners Operations Association in May 2017, ZAF participated with three aircrafts: the Chinese Z-9 helicopter, the Chinese Y-12 trainer, and the Italian SF-260TW. The ZAF in-flight magazine proudly described how the ZAF aircrafts, “enthralled show participants with their aerobatics and after they landed people flocked to the aircraft to learn more about them.”⁷⁵ In other words, the ZAF has no qualms in sharing at least some of their aircraft purchases with the public. Based on the amount of media coverage, there appears to be very little public pushback on these purchases. In contrast, the recent procurement of new business jets generated much more controversy.

The issue of the business jets, often referred to as presidential jets or luxury jets, was debated in parliament as far back as August 2010, when Deputy Minister Chilembo was asked, “why the government acquired the presidential jet [Gulfstream G650] on lease; what the terms of the contract were; and how much money the government had spent on the lease of the presidential jet.” Chilembo answered that the, “Government acquired the presidential jet on lease because it was not able to purchase the aircraft in a cash transaction due to financial constraints [...] due to security considerations, the Government is not in a position to disclose the terms of agreements signed with Execujet,” referring to the Swiss-based business aviation company.⁷⁶ This is a rare instance where ZAF procurements were publicly debated.

Further controversy arose in 2018 after the Ministry of Finance published the 2017 Annual Economic Report. In the report, the list of loans contracted by the government in 2017 included two loans from the Israel Discount Bank, one worth US\$ 400 million and another worth US\$ 7.7 million, both allocated as “Defence Project” without further elaboration. The Israeli Bank Hapolim B.M. was also listed to have contracted a US\$ 55.6 million loan for another “Defence Project.”⁷⁷ Furthermore, in September 2018, the Russian aircraft supplier Sukhoi announced that a VIP business jet would be delivered to President Lungu, costing about US \$45-49 million. An industry expert noted that this is a “fairly high price. The competitive price for Sukhoi Business Jet as a new product on the market would be US\$ 30-40 million.”⁷⁸ The media further reported that part of the Israeli Discount Bank loan was to be used for another business jet: a Gulfstream G650 that has been spotted in international airports.⁷⁹ The public uproar was great enough that the Permanent Secretary of the Ministry of Defence, Sturdy Mwale, released a statement in October 2018 defending the budget. The statement did not provide additional information on the budget items, only that “there is no US\$ 400 million being spent on any single aircraft or military equipment.” Moreover, Mwale criticized the media, “now that they are tired of attacking Chinese-financed projects, they have turned to attacking all procurement projects involving the State of Israel.”⁸⁰ During the same time, Vice President Inonge Wina was on the defensive again in the parliament as members questioned the utility of additional business jets:

“In an environment where the economy of the country is under stress, where we cannot hire teachers because there is no money and cannot buy chalk because there is no money, yet the President already has a jet. Is Her

Honour the Vice-President convinced that the purchase of a second jet is in the interest of the Zambian people?”

Wina admitted that some of the aircrafts purchased would be used for VIPs in general. However, she stressed that members of parliament needed to recognize the long-term planning required in airline acquisition.

“We cannot just walk into a shop and buy an aeroplane off the counter. It has to be made. It takes time to go through the whole process of making a plane [...] Concerning the issue as to why the Government should do this at this time is neither here nor there because this decision was reached many years ago.”⁸¹

In October 2019 during the Russia-Africa Forum, Russia’s Industry and Trade Minister, Denis Manturov, said that “we signed a contract for the supply of a VIP version of the SSJ 100 to Zambia. But in Zambia, besides the advance payment, there were no funds to finance this aircraft, so the contract has been frozen.”⁸² The new Sukhoi jet orders appear to have been canceled now, based on reported statements by Vice President Wina.⁸³ The uproar over these allegations was serious enough that even the Israeli embassy issued a statement distancing themselves from the fray.⁸⁴

Even in times of austerity, the Zambian public may perceive the purchases of trainers and cargo planes as legitimate. However, when the public saw government officials were being transported on luxury jets instead of competitively priced airliners, these procurements began to lose legitimacy. Fundanga confirmed that although the purchase of fighter jets were not controversial to the public, presidential jets, which are more visible, were less publicly accepted with debt concerns looming in the background.⁸⁵ While the ZAF may be popular among Zambians in certain sectors, such as an employer, housing provider, and source of national prestige, the public will not indiscriminately support all ZAF procurements or projects. The public’s response to the development of national forests and the purchase of business jets for official government travel serve as concrete examples to how far public support for the ZAF truly extends.

STATE-CORPORATE RELATIONS: AVIC’S RELATIONSHIP WITH THE ZAMBIAN GOVERNMENT

ZAMBIA’S INCREASING RELIANCE ON CHINESE MILITARY aircrafts cannot be separated from the long and complex history between AVIC and Zambia. The export of MA60s and Y-12s with Eximbank loans in 2006 was one of the first projects AVIC had in Zambia. In subsequent years, AVIC has increased their footprint in Zambia from aircraft supplies to infrastructure development, a booming sector in the country. According to Johns Hopkins SAIS’s Chinese Loans in Africa database, there have been at least six Eximbank loan-financed construction projects in Zambia contracted to AVIC (Table 3)

Moreover, AVIC provided a US\$ 50 million supplier credit to Zambia in 2015 to purchase earth-moving machinery for road repairs and construction. As compared to

Eximbank loans, supplier credit comes with much greater risk for the company because the company must shoulder the cost of collection and nonpayment themselves. Beyond credit-financed projects, AVIC has received contracts for other construction projects including housing, toll stations, and university campuses.⁸⁶ By hosting sports games and donating school supplies, AVIC also actively cultivates their public image in Zambia.⁸⁷

Table 3: Eximbank Financed Construction Projects in Zambia

Year	Loan (US\$ million)	Project
2010	47	Mobile Hospital Project
2010	244	Mongu-Kalabo Road
2011	244	Mongu-Tapo Road
2013	296	Lusaka Urban Road Rehabilitation Phase I
2016	337	Ndola International Airport Phase I
2016	313	Lusaka Urban Road Rehabilitation Phase II

Source: SAIS-CARI Database

AVIC has such a prominent presence in Zambia's construction sector that former Minister of Infrastructure and Housing Ronald Chitotela reportedly said that, “maybe AVIC is one of the best companies that is performing in Zambia that is delivering the projects within schedule.”⁸⁸ During a parliamentary debate in February 2019 members of parliament complained that AVIC was getting what felt like all the project contracts in Zambia, which Chitotela denied.⁸⁹ Chitotela was later arrested over corruption charges.⁹⁰ In the same debate over why AVIC received the contract to build the National Resources Development College, the Minister of Agriculture Katambo defended the decision stating that they had received offers from a number of companies, but that, “looking at all these offers, the one which was most comprehensive was the one for AVIC International.”⁹¹ Given the number of construction projects that have gone to AVIC, the Zambian opposition frequently accuses AVIC and the Zambian government of opaque contracting and kickbacks.⁹²

In Zambia's 2006 presidential election, Michael Sata from the opposition party, Patriotic Front, challenged the incumbent Levy Mwanawasa on a fiercely anti-Chinese platform, going as far as threatening to sever diplomatic ties with China by recognizing Taiwan if elected.⁹³ Even though Sata was defeated in 2006, he ran again in 2011 on a similar platform, declaring during rallies that, “Zambia has become a province of China [...] The Chinese are the most unpopular people in the country because no one

Having a range of military suppliers effectively diversifies the risk of having parts and maintenance cut off for the entire armed forces. In this respect, it is to Zambia's advantage that their aircrafts are not solely sourced from China.

trusts them. The Chinaman is coming just to invade and exploit Africa.”⁹⁴ The fact that such a platform was able to deliver him the presidency in 2011 indicates that his message resonated with the Zambian voters. Nonetheless, once in office Sata toned down his rhetoric. During his presidency from 2011 to 2014, Zambia purchased the L-15 supersonic trainers using US\$ 211 million in AVIC supplier's credit, becoming one of the first countries to buy this model from China. Moreover, Zambia accepted US\$ 296 million in Eximbank loans for Lusaka's urban road rehabilitation project, which was also contracted to AVIC. So, despite rising levels of anti-Chinese sentiment, AVIC has ultimately been able to maintain its standing in Zambia.

In other words, AVIC has cultivated their presence across Zambia at multiple levels. Although it is a relationship that began with financial support from the Chinese government via Eximbank loans, AVIC has since established sufficiently strong footing in Zambia that they feel confident and invested enough to offer supplier's credits themselves. An employee at the Zambian Ministry of Finance noted that compared to newer Chinese companies in the Zambian market, companies with longer histories in Zambia, such as AVIC, often had better knowledge and understanding of the local business environment and subcontractors.⁹⁵ With each project AVIC wins, it creates a synergy that increases the likelihood of receiving future contracts. AVIC has carefully cultivated an image as the “go-to” company for a variety of development challenges in Zambia. This relationship was not created overnight but required both a jumpstart from the Chinese government as well as long-term investment from the company itself.

AVIC's current success in Zambia stands in contrast to Italian suppliers. In the early days post-independence, Italy played a comparable role in Zambia's defense sector and economy as China does today. When Zambia was unsatisfied with the slow progress of pilot training from Britain, Italy stepped up and produced fighter pilots within three years when British commanders had predicted it would take more than ten.⁹⁶ The bulk of the ZAF's aircrafts through the 60s and 70s were supplied by Italian companies, when relations with the US, Soviet Russia, and Britain were either cool or deteriorating.⁹⁷ Italian companies also built the Mumbwa and Mbala airbases and managed the ailing national airline.⁹⁸ However, by the 1990s, the Italian government's support for military production decreased, driven by the precipitous fall in demand in the international arms market. Italian defense companies were asked to adjust production to meet new market realities. Aermacchi, who formerly supplied large numbers of trainers to Zambia, converted some of their production of trainer aircrafts into projects that, “study the use of military flight simulators for civilian use.”⁹⁹

Just as the Italian government was withdrawing their defense sector support, China was ramping up their “Going Out” initiative, which supported Chinese companies in seeking contracts abroad in the face of domestic market saturation. By 2018, cumulative loan commitment from Chinese policy banks, commercial banks, companies, and the Ministry of Commerce of China exceeded US\$ 9 billion.¹⁰⁰ This amount of investment, paired with the goodwill generated in historical bilateral relations and the overall lower cost of Chinese goods and services, allowed Chinese

companies like AVIC to quickly gain footing in Zambia. In 2015, the Italian defense industry called for export support from their government, specifically “a bank that can help finance the buyer, similar to the US Foreign Military Financing program,” referring to the US program that offers grants and loans to help countries purchase US defense equipment.¹⁰¹ Currently, Italian suppliers appear to rely on commercial banks for export loans; there are reports that Zambia’s two C-27Js from Leonardo, financed by the Italian bank Intesa Sanpaolo with a US\$ 107 million loan, has gone into default.¹⁰² Kenya also reportedly took out US\$ 198 million for three C-27Js from the Italian bank Unicredit S.p.A.¹⁰³ While these reports could not be independently verified, companies like AVIC have a distinct advantage in the export market, with dedicated government-backed export finance organizations like Eximbank that can tolerate higher default risks than commercial banks.

LOGIC 4 PSYCHOLOGIC

PRESTIGE IN HIGH TECH WEAPONS AND PEACEKEEPING MISSIONS

NO DISCUSSION OF ARMS BUILD-UP IS COMPLETE without an investigation into the psychological drivers. British historian and diplomat E. H. Carr states that, “if your strength is recognized you can generally achieve your aims without having to use it.”¹⁰⁴ International political economist Robert Gilpin further elaborated that, “prestige, rather than power, is the everyday currency of international relations.”¹⁰⁵ Both Carr and Gilpin define prestige in the context of the international system as the ability to deter other states from attacking. However, prestige can also be directed internally, especially in cases like Zambia that currently have few threats from the air.

Zambia’s current security concern along the DRC border means that the purchase of airliners and cargo planes for moving supplies and personnel have tangible utility. In contrast, the strategic ownership of supersonic aircrafts is harder to justify. Compared to transport and trainer aircrafts, supersonic aircrafts are much more expensive to buy and maintain and are only useful for a narrow range of tasks. Zambia currently possesses two MiG-21UM trainers and eight MiG-21bis fighters, which were ordered and delivered between 1976 and early 1980, and upgraded in Israel in 1997-98.¹⁰⁶ In addition, Zambia has twelve Shenyang F-6 fighters, purchased from China in 1978, “to act as a deterrent to the Rhodesian Air Force who were regularly entering Zambian air space.”¹⁰⁷ As of 2017, eight of these seem to be operational.¹⁰⁸

The main purpose of fighter aircrafts is air-to-air combat. Their short loitering time (the time an aircraft can remain airborne over its target) means that they are comparatively impractical for air-to-ground attacks, which is Zambia’s main priority in the event of border unrest. Even though neighboring countries all possess supersonic fighters, current amiable foreign relations indicate a very low possibility of open warfare with any of them. Thus, these recent purchases are better explained by a pursuit for prestige.

Even though US-China relations have fluctuated between cautious engagement and open rivalry over the past 20 years, by maintaining cooperation with both sides, Zambia can cultivate good relationships with otherwise adversarial partners. Zambia's relatively low strategic importance (compared to countries like Djibouti) works to Zambia's advantage in this case, offering them more leeway to diversify bilateral relationships without being pressured to choose sides.

Inward-looking prestige is aimed at promoting a sense of national pride and unity among domestic audiences. Sociologists Mark Suchman and Dana Eyre observed that advanced weapons were often procured by young states as symbols of sovereignty and independence:

This association between arms and sovereignty may encompass specific weapons systems as well as general organizational structures. Once an object, be it an independent air force or supersonic aircraft, becomes ensconced as part of the world-cultural definition of statehood, the critical variable governing nation-states' acquisition of this object will not be their functional need for it, but rather their immersion in the world system that gives the object its meaning.¹⁰⁹

This pursuit for domestic prestige is not limited to newly independent countries. The Blue Angels Squadron of the US Navy is a similar tool to promote domestic prestige, as they have no combat abilities and the majority of their air shows are performed in the US.¹¹⁰

Another indication of Zambia's pursuit for prestige could be seen in their active participation in UN Peacekeeping missions. Extensive literature already exists on developed countries using peacekeeping missions to cultivate prestige, even from fairly small states such as those in Scandinavia.¹¹¹ In recent years, developing countries have become the top contributors of troops to peacekeeping missions.¹¹² The phrase, "African solutions to African problems," coined by the political economist George Ayittey, is now associated with a sense of independence and agency among African countries. Even though there are a myriad of reasons for participating in peacekeeping missions, with financial benefits among them, prestige and values are also legitimate drivers.¹¹³

Whether for prestige or for attracting more foreign aid, Zambia's decision to participate in peacekeeping missions justifies the need for improved personnel transportation from the ZAF. Zambia has participated in United Nations' peacekeeping missions across Africa, including those in Angola, Rwanda, Sierra Leone, and Sudan.¹¹⁴ Zambia also currently contributes towards the Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA). Participation began with Zambian Battalion 1 (ZAMBAT I), which was first deployed to the Central African Republic (CAR) in mid-2015.¹¹⁵ ZAMBAT V recently completed training with partners from the US, the UK, and France, and will be relieving ZAMBAT IV in the CAR.¹¹⁶ These missions greatly increase the need for personnel transport. In Zambia's 2017 report for the Committee on National Security and Foreign Affairs, the ZAF reportedly, "had difficulties taking part in UN peacekeeping missions because of difficulties in upgrading the M17 helicopter."¹¹⁷ The Russian Mi17 is a transport helicopter and this specific report emphasized its importance to enhance transport abilities for peacekeeping missions. Ultimately, the committee recommended, "that funding be sourced to upgrade the M17 and to buy additional aircraft to enable ZAF take part in the UN Peacekeeping missions and improve local operations."¹¹⁸

LOGIC 5 SYSTEMIC

ARMS PURCHASES AND ALLIANCES

WITH THE CONFLUENCE OF HISTORICAL TIES, FINANCIAL support, domestic political economy, and a quest for prestige, Zambian rationale for the purchase of Chinese military aircrafts appears over-determined. The question is no longer why Zambia buys military aircrafts from China at all, but why did Zambia not buy *more* military aircrafts from China? Indeed, one might almost expect Zambia to buy from China exclusively.

Yet, there is still diversity among ZAF's suppliers. This is because reliance on one weapons supplier is strategically dangerous regardless of aircrafts' capability, financing options, and foreign relations concerns. Should bilateral relations sour, obtaining parts and maintenance becomes difficult. Both Iran and Egypt experienced similar constraints with their military equipment: Egypt with Soviet Russia after the pro-West Anwar Sadat became president in 1970 and Iran with the US after the 1979 Islamic Revolution. Having a range of military suppliers effectively diversifies the risk of having parts and maintenance cut off for the entire armed forces. In this respect, it is to Zambia's advantage that their aircrafts are not solely sourced from China. This was similar to Kuwait's strategy in the 1990s, arming themselves with US tanks, Soviet armored personnel carriers, and Chinese artillery.

Moreover, the Zambian Defence Force continues to receive military training from the US. Even though US-China relations have fluctuated between cautious engagement and open rivalry over the past 20 years, by maintaining military cooperation with both sides, Zambia can cultivate good relationships with otherwise adversarial partners. In this respect, the enemy of your friend can still be your friend. Zambia's relatively low strategic importance (compared to countries like Djibouti) works to Zambia's advantage in this case, offering them more leeway to diversify bilateral relationships without being pressured to choose sides.

CONCLUSION

WHY WOULD A DEVELOPING COUNTRY WANT TO EXPAND their air force, and why would Chinese arms suppliers be preferred? This paper has proposed a multifaceted answer to these questions based on field interviews and desk research, developing five different logics to understand the arms trade relationship between Zambia (a developing country) and China (a rising arms supplier in the international market). Historical military experience and bilateral relations, current strategic concerns in both defense and financing, domestic political economy, a psychological quest for prestige, and systemic concerns are all essential factors that cannot be subsumed within each other. A uni-dimensional explanation would fail to capture the complete picture, leading to skewed or even erroneous interpretations of the intentions of both arms buyers and arms sellers. These approaches are not mutually exclusive but serve to reinforce and support each other. This paper has demonstrated that a comprehensive interpretation of a political phenomenon needs to have multiple levels

of analysis, ranging vertically from subnational dynamics to international dynamics, with agents at different levels interacting with each other (states, multilaterals, corporations, etc.). ★

APPENDICES

NON-CHINESE COMPARABLE MODELS WERE CHOSEN BASED ON SEVERAL MEASURES including capacity, availability, and popularity as measured by the number of units sold. Capacity can be measured both in the number of passengers or maximum take-off weight. Models no longer in production at the time of purchase were excluded. Finally, a popular model already being used by other countries would offer more user feedback for new customers. Tracking down every price ever offered to all buyers of a specific model aircraft is beyond the scope of this study. Instead, the author focused on developing country purchasers, who are more likely to face similar budget constraints as Zambia.

Appendix A: Prices of MA60 and Comparable Aircraft

Country	Price in US\$ per Unit	Year
MA60 Airliner		
Zambia	10-13 million ¹¹⁹	-
Nepal	26 million ¹²⁰	2013
Indonesia	15.5 million ¹²¹	2011
Republic of the Congo	13 million ¹²²	2007
Zimbabwe	12 million (estimate) ¹²³	2005
Comparable model: Antonov An-140 (Russian)¹²⁴		
Libya	9 million ¹²⁵	2008
Iran	8.5 million ¹²⁶	1998

Appendix B: Prices of Y-12 and Comparable Aircraft

Country	Price in US\$ per Unit	Year
Y-12 Transport		
Zambia	3 million or less (estimate)	-
Brazil	5 million ¹²⁷	2018
Canada	3 million ¹²⁸	1998
Nepal	4 million ¹²⁹	2013
Comparable model: Let L-410 Turbolet (Czech)¹³⁰		
Poland	15 million ¹³¹	2019
Brazil	3.8 million (offer) ¹³²	2006
Russia	8 million ¹³³	2012

Appendix C: Prices of Hongdu JL-8 and Comparable Aircraft

Country	Price in US\$ per Unit	Year
Hongdu JL-8 Trainer/Light Attack		
Zambia	8.3 million	-
Venezuela	12.6 million ¹³⁴	2016
Bolivia	9.7 million ¹³⁵	2009
Egypt	5.79 million ¹³⁶	1999
Zimbabwe	12.5 million ¹³⁷	2006
Comparable model: Yak130 (Russian)¹³⁸		
Bangladesh	33.3 million ¹³⁹	2014
Algeria	12.5 million ¹⁴⁰	2008
Syria	15.3 million ¹⁴¹	2012
Laos	30 million ¹⁴²	2019
Belarus	15-22 million ¹⁴³	2019

Appendix D: Prices of L-15 and Comparable Aircraft

Country	Price in US\$ per Unit	Year
L-15 Supersonic Trainer		
Zambia	35.16 million	-
Venezuela	Not available	Rumored order for 24 units ¹⁴⁴
Uruguay	Not available	Rumored order for 8 units ¹⁴⁵
Comparable model: KAI T-50 Golden Eagle ¹⁴⁶		
Iraq	49 million ¹⁴⁷	2013
Indonesia	25 million ¹⁴⁸	2011
Thailand	27.5 million ¹⁴⁹	2015
Thailand	32.25 million ¹⁵⁰	2017
Philippines	35 million ¹⁵¹	2014

Appendix E: Prices of Z-9 and Comparable Aircraft

Country	Price in US\$ per Unit	Year
Z-9 Military Utility Helicopter		
Zambia	15 million (estimate) ¹⁵²	-
Cambodia	16.25 million ¹⁵³	2013
Philippines	13 million ¹⁵⁴	2007
Comparable model: AgustaWestland AW139¹⁵⁵		
Italy	17 million ¹⁵⁶	2019
Malaysia	20 million ¹⁵⁷	2008
Egypt	18.8 million ¹⁵⁸	2011

ENDNOTES

1. “Trainers” refer to training aircrafts used for pilots and aircrew flight training.
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