

# Xi's Military Reforms and its Efficacy in Furthering China's National Security Objectives

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## Abstract

Chinese President Xi Jinping announced landmark military reforms in late 2015. The reforms intend to remove the 'institutional obstacles, structural contradictions and policy problems' with the aim of modernising the People's Liberation Army's (PLA) organisational structure in order to 'further unleash its combat effectiveness'. They also aim to convert the PLA into a world-class force by 2049. However, assessing the reform process in the context of organisational structures and force-specific objectives, it appears that there remains much to be desired. The reforms have certainly made the PLA a better equipped regional force. But they have, thus far, only had a limited impact in terms of preparing the PLA to meet key strategic and security objectives.

## Keywords

People's Liberation Army, military reforms, theatre commands, Central Military Commission, Xi Jinping, training

## Introduction

Soon after Xi Jinping assumed charge as the Central Military Commission's (CMC) chairman in November 2012, he set the stage for a sweeping restructuring of the People's Liberation Army (PLA). Through this restructuring, he sought to enhance China's deterrence posture; raise the army's combat readiness; achieve complete modernisation of military theory, organisation, personnel and weapons; and convert the PLA into a 'world-class military'—a phrase that has yet to be defined officially—by 2049 (Blasko, 2019b). An educated guess is that it would mean

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being at par with the United States (US), the United Kingdom (UK), French and Russian armed forces (Desai, 2020b). The need for this was underscored in the Communiqué adopted at the Third Plenary Session of the Chinese Communist Party's (CCP) 18th Central Committee (CC) (*China.org.cn*, 2014). Xi also aimed at consolidating his control over the forces and sending a message to the PLA rank and file that anyone who wasn't in line with the leadership's agenda could be taken down. For instance, as part of his anti-corruption campaign, he went after prominent military leaders such as Xu Caihou, Guo Boxiong, Gu Junshan, Zhang Yang and Fang Fenghui (Gan, 2015; Ng, 2014, 2019; Ni, 2017).

Following this, Xi established and chaired a leading group on *deepening reform on national defence and military* in 2014. This group was mandated to identify PLA's weaknesses and prepare a blueprint for the military reforms (Reuters Staff, 2014). He launched the first of his key reforms by announcing a force reduction target as China marked the 70th anniversary of the end of the Second World War. 'Here, I announce that China will cut the number of its troops by 3,00,000,' declared Xi (*Xinhua*, 2015b). This was followed by the release of *Opinions of the CMC on Deepening National Defense and Army Reform* in November 2015 (Garafola, 2016). The document highlighted the 'leadership management system, joint operations command system, army size structure, troop restructuring, military personnel training, civil-military integration, armed police force command and structure and the military rule of law system' as important areas of military reforms (*Xinhua* 2016a).

China's ongoing reforms, which started with the recent troop reduction, raise a few questions. What has changed since the beginning of the ongoing reforms, and what has remained the same? How are these reforms being implemented? Have these reforms improved the PLA's operational capabilities? Has it made the PLA a more effective force? Most importantly, has it helped China to forward its national security goals?

In this article, we argue that while the reforms have helped further China's national security interests, the PLA continues to struggle with key shortcomings that limit its development as a world-class force (*Xinhua*, 2017a). We study the process of implementation of these reforms. In order to do so, we classify the different reform measures into five distinct categories: organisational changes to the CMC, force restructuring, changes in defence financing and weapons acquisition, strategic and tactical weapons allocations based on threat assessment, and changes to the PLA's training regime. All these initiatives, put together, give a broad picture of the military reforms that Xi has carried out since assuming power in 2012. In addition to these, Xi has also elevated military-civil fusion (MCF) to the status of national strategy, made changes to military education and reformed the armed forces' management of veterans' affairs. These changes, however, require broader study and are beyond the scope of this article. After detailing the implementation process, we assess their efficacy in furthering China's stated and revealed national security objectives.

## Implementation of Military Reforms

In this section, we identify five broad areas of military reforms and assesses their implementation. Some of these were initiated by Xi in late 2015, while others were initiated by his predecessors but were fast-tracked under his watch.

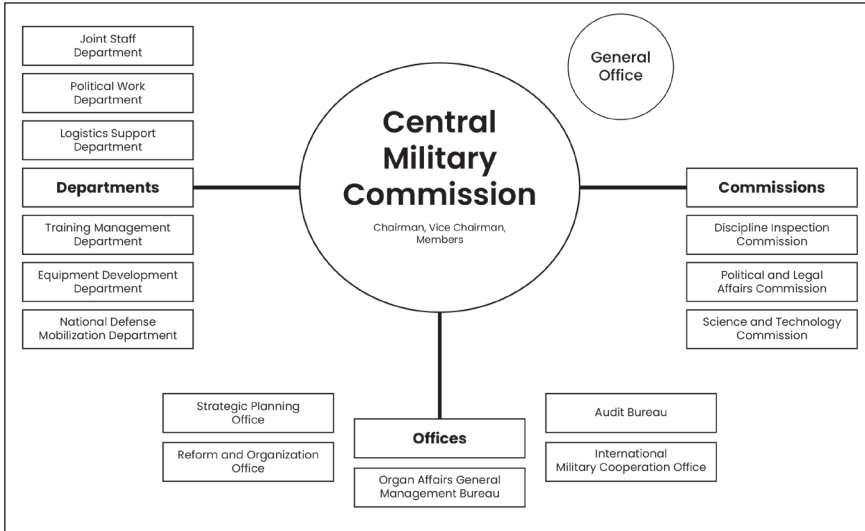
### *Organisational Changes Within the CMC*

Xi made three critical organisational changes within the CMC. First, he dismantled the CMC's four bureaucratic departments and replaced them with smaller departments and commissions (*Xinhua*, 2016b). Second, he reduced the size of the CMC's top leadership from 11 to 7 members (Allen et al., 2016). Finally, he brought the People's Armed Police (PAP) and the coastguard under CMC's direct command (Wuthnow, 2019a, p. 4). These changes were political in nature and aimed at improving the Party's and his control over the armed forces.

On 11 January 2016, Xi announced that four departments—the General Staff Department (GSD), General Political Department (GPD), General Logistics Department (GLD) and General Armament Department (GAD)—which were the core of the existing military bureaucracy, would cease to exist (*Xinhua*, 2016c). These Soviet-inspired structures had, over time, developed into semi-independent, corrupt fiefdoms with little oversight by the civilian authorities. Xi's reforms dismantled these core structures, replacing them with 15 smaller functional departments, commissions and offices (Wuthnow & Saunders, 2019, pp. 6–10; see Figure 1)

Xi has direct oversight over these 15 departments, commissions and offices through the CMC's General Office and his loyal CMC appointees. It enables him to have enhanced control of the military bureaucracy, given the increasing concerns over corruption and lack of coordination among these departments (Cooper, 2018, p. 8).

Following the 19th Party Congress in October 2017, the CMC's composition was restructured, reducing the total number of members from 11 to 7. Before this, the CMC included the chairman, two vice-chairmen, the heads of the four disbanded departments and the three service chiefs (Wuthnow, 2019b, p.11). After the restructuring, the three service chiefs and the heads of the four disbanded departments lost their seats. The new structure had the chairman, two vice-chairmen, the defence minister, the chief of the joint staff, the director of the Political Work Department and the head of PLA's discipline inspection commission (see Table 1 for details). This is the smallest CMC since 1932, but it is also similar to the 1982 CMC under Deng Xiaoping's command. The inclusion of the head of the discipline inspection commission over the service chiefs was indicative of the effort to deepen political loyalty within the armed forces. It also reflected the enduring concern about ideological weakness and corruption, which the leadership believed were having a corrosive effect on the Chinese armed forces (McFadden et al., 2019, pp. 558–561). This was underscored by the purging



**Figure 1.** New CMC Structure

**Source:** The authors.

of Fang Fenghui, the founding chief of CMC’s Joint Staff Department, and Zhang Yang, the founding chief of CMC’s Political Work Department, on corruption charges in late 2017. Notably, Xi, under his anti-corruption campaign, had nearly removed over two thousand CCP and PLA personnel, which includes at least 45 PLA officials at the rank of major generals and above by the end of 2017 (Grossman & Chase, 2016). The new commanders of all five military services after the reforms were Xi’s old allies, and most of them were fast-tracked based on their loyalty to him (Doyon, 2016, p. 10; Verse, 2016).

**Table 1.** Pre and Post Reforms CMC

Number of Members	Pre-Reforms CMC	Post-Reforms CMC
1	Chairman	Chairman
2	Vice chairman	Vice chairman
3	Vice chairman	Vice chairman
4	Defence minister	Defence minister
5	GSD director	Joint Staff department director
6	GPD director	Political Work Department director
7	GLD director	Discipline Inspection Commission secretary
8	GAD director	
9	Navy chief	
10	Air force chief	
11	Second artillery chief	

**Source:** Joel Wuthnow and Phillip Saunders (2019, p. 11).

The organisational restructuring also brought the PAP and the coastguard under the direct command of CMC; however, the PAP reforms were also partly aimed at limiting the misuse of the forces by the provincial leaders under the State Council. Earlier, these two forces reported to the dual command of the CMC and the State Council (Cordesman, 2019, p.171). Under the new structure, which was implemented in 2017–2018, the PAP was divested from all its lower intensity missions such as border defence, forestry and natural resource protection, fire-fighting and hydropower. It gained the responsibility of the Chinese Coastguard and now focuses on three core missions—internal security, maritime security and supporting the PLA in times of war (Boyd & Nouwens, 2019). The two organisations also appear to have benefited from CMF and they focus on scientific and technological developments, and they appear to be better equipped with new surveillance tools such as high-definition cameras, facial recognition systems and satellite communication (Boyd & Nouwens, 2019; Jing, 2019; *Xinhua*, 2019a, 2019b). The focused and high-intensity missions, a centralised command structure and the availability of modern technologies have turned PAP into a potent force to manage internal disturbances within the mainland.

### *Changes to Force Structure*

Starting from 2015, four key changes were made in the force structure and composition of the PLA: creation of three new forces, formation of theatre commands, reduction in the number of troops, and force restructuring.

On 31 December 2015, Xi announced two service-related changes. First, the PLA Second Artillery Corps was renamed as the PLA Rocket Force (PLARF) and upgraded to full-service status. Second, a new force, the PLA Strategic Support Force (PLASSF), was established to oversee information operations (*China establishes rocket force and strategic support force*, 2015). The Second Artillery Corps, which oversaw China's conventional and nuclear missiles programme, was created in 1966—two years after its first successful nuclear test at Lop Nor (Fravel, 2019, p. 260). Until being renamed as the PLARF and upgraded to full-service status, it operated as an independent branch that was considered equivalent to the other services (Logan, 2019, p. 393). During the inauguration ceremony for the PLARF, Xi described it as a 'core force of strategic deterrence, strategic support for great power status and a linchpin of China's national security' (Chase, 2018, p.1). Adam Ni and Bates Gill highlight the tactical and strategic drivers for the creation of the PLARF. They argue that at the tactical level, the force provides the PLA with more options in planning for regional scenarios involving Taiwan, the East and South China seas, and the Korean Peninsula. On a strategic level, they claim, it increases the PRC's credible nuclear deterrence (Ni & Gill, 2018). Some of the PLA RF's latest developments include deploying the Dong Feng (DF)–26 intermediate-range road-mobile dual-use missiles, which create nuclear ambiguity and dangerous inadvertent escalation risks leading to many scholars, including these authors, questioning the credibility of China's No-First Use doctrine (Bommakanti & Desai, 2021).

The creation of the PLASSF, meanwhile, came as a surprise to most observers (Costello & McReynolds, 2019a, p. 12). The new force was created to enhance synergies between China's space, cyber and electronic warfare capabilities, which the PLA considers critical for 'commanding the strategic heights' of military and strategic competition (State Council Information Office [SCIO], 2015). The PLASSF forms the core of China's information support and space warfare, and it reports directly to the CMC (Mattis & Kania, 2016, pp. 15–27). Elsa B. Kania notes that the force appears to have some similarities with the US Cyber Command and US Strategic Command, as highlighted in the authoritative Chinese military textbook *The Science of Military Strategy 2015* (Xiao, 2015, p. 338). The PLASSF has a long list of tasks that it must carry out. These include information-gathering and analysis, supporting joint operations, boosting strategic deterrence in space and cyber domains, enabling force development, cyber espionage, countering space-cyber-electromagnetic missions, weakening the enemy's joint operational capabilities, targeting the enemy's command systems and also some elements of psychological warfare and technical reconnaissance (Kania & Costello; Costello & McReynolds, 2019b, pp. 437–518).

Later that year, the Chinese leadership announced the establishment of the Joint Logistic Support Force (JLSF), with the aim of overhauling the PLA's war-time logistic delivery system. The PLA JLSF was formed by combing logistic support forces across the different services and CMC organs (Hui, 2019). The JLSF is tasked with enhancing the PLA's integrated joint operations capabilities, unifying joint logistic forces at a strategic level and supporting the newly established theatre commands (McCauley, 2018). Since its formation, the JLSF has supported the PLA's other services and theatre commands and has conducted more than 50 military drills. The force also played a pivotal role in managing China's logistics and emergency supply chain following the COVID-19 outbreak in Wuhan and Hubei (Wuthnow, 2020).

The formation of these three forces and the dissolution of the four general departments were accompanied by the creation of a new headquarters (HQs) for the PLAA. The army previously enjoyed a privileged position due to its proximity with the military bureaucracy. This change brought it on the same level as all other services (Blasko, 2019a, pp. 348–349).

Apart from establishing new forces, on 1 February 2016, the Chinese leadership announced a shift away from the old Soviet-inspired Military Region (MR) system to the US-inspired theatre command (TC) model (*China Military Online*, 2016). The CMC reorganised the seven military regions—Shenyang, Beijing, Jinan, Nanjing, Guangzhou, Chengdu and Lanzhou—into five geographic TCs, while also providing a specific 'strategic direction' to each (Wuthnow & Saunders, 2019, p. 17). This was reportedly the outcome of a thorough risk assessment that was conducted after Xi took over as CMC chairman (*Xinhua*, 2015a). These changes, as per the assessment, were necessary to transform the PLA into a force capable of carrying out integrated joint operations to secure China's interests within and beyond China's borders.

Under the new system, as Wuthnow and Saunders highlight, the Eastern TC (ETC) replaced Nanjing MR and focused on the Taiwan Strait (TS) and East

China Sea (ECS). The Southern TC (STC) replaced Guangzhou MR and was responsible for the South China Sea (SCS). The STC was also mandated to provide backup forces for the ETC in case of a Taiwan contingency. The Northern TC (NTC) replaced the Shenyang MR, with specific focus on the Korean Peninsula. The Central TC (CTC) replaced the Beijing MR and was mandated to protect the capital. It also acts as an anchor to provide additional troops to other theatres, if needed (Wuthnow & Saunders, 2019, p. 17). The Western TC (WTC), which is the largest among the five, was formed by merging the Lanzhou and Chengdu MRs. Its mandate entails ensuring security along China's land boundaries with Central Asian states, India, Nepal and Bhutan. It is important to note that despite the formation of a new WTC, the Tibet Military District (TMD) and Xinjiang Military Districts (XMD) were retained (McCauley, 2017). The former, which overlooks Arunachal Pradesh on the India–China border, was elevated a level over China's other 28 military districts (Kou, 2015). But what this means for the operational relationship between the TMD and WTC is unclear. However, an informed guess is that the military districts have to deal more with internal security issues during peacetime and, therefore, are placed differently for operational control. But during a conflict situation, they will be under the operational jurisdiction of the WTC—in the case of Xinjiang and Tibet.

MRs were primarily administrative units dominated by ground forces (Burke & Chan, 2019, p. 234). In the MR system, during wartime, Beijing would take over command and control, and select units would be drawn from multiple services for the region, impacting the combat readiness of these units (Cheng, 2015, pp. 458–461 Yujun, 2016). Also, the PLA had experienced major delays in transitioning from peace to wartime due to lack of inter-service training under this model. Under the new structure, TCs were freed from administrative duties and given complete operational responsibilities during peacetime and wartime (Wuthnow, 2019a, p. 19). The TCs now also have unified command and control authority over most of the services within their jurisdiction. Following the reforms, administrative work was allocated to the CMC and individual services were mandated to focus on force development (Zhang, 2019, p. 224). This division of labour and clarification of roles were inspired by the United States' military wartime command and control experience (*Renmin Ribao*, 2016). The intended outcomes of these changes were likely to improve the PLA's ability to conduct integrated joint operations, enable combat readiness and increase efficiency. Moreover, as part of the reforms, a new CMC Joint Operations Command Centre was established in 2014, which operates as the highest authority during both war and peace times. This centre is supported by CMC's newly established Joint Staff Department and plays a critical role in improving inter and intra-service and TC coordination (Zhang, 2019, p. 224).

Another significant change was the shift in emphasis from manpower to firepower. On 3 September 2015, Xi announced the downsizing of over 300,000 military personnel (Wong et al., 2015). This, of course, was not the first time that force reduction was being carried out. In fact, there have been over 10 manpower cuts since the 1950s. In the past, as in this time, the emphasis was on reducing the number of ground forces personnel, which constituted almost 70% of



the total force in 2015 (Wuthnow & Saunders, 2019, p. 9). From 1997 to 2018, the PLA army lost over 55% of its manpower (Blasko, 2019a, p. 345). This indicates the PLA's attempts, as highlighted in its 2015 defence white paper, to transition from a manpower-intensive to a technology-oriented force. More importantly, the 2015 defence white paper demanded the PLA to abandon its traditional land-centric mentality and attach greater importance to seas and oceans (SCIO, 2015). Previously, the 2013 defence white paper had emphasised the role of the PLA Navy (PLAN), PLA Air Force (PLAAF), and Second Artillery Force but wasn't critical of China's over-reliance on ground forces (SCIO, 2013).

As evident from Table 2, the PLA Army (PLAA) bore the brunt of the force reduction carried out under Xi. In 2015, the army comprised over 1,600,000 active personnel. This number fell to 975,000 by 2018–2019. The PLAN saw an increase of 15,000 personnel, while the PLAAF's strength dipped by 3,000 personnel. By the end of 2018, as Table 2 highlights, the army, for the first time since 1949, comprised less than half of all PLA personnel. State media claims that over 1,000 units at the regiment level or above, and 30% of commissioned officers were cut as part of the reforms (*Xinhua*, 2017b). Some of the personnel could have been moved to other services and paramilitary forces. Others are likely to have been absorbed by local and provincial governments, state owned enterprises and private enterprises.

The reforms also quickened the process of reducing the number of existing group armies. A Chinese group army is roughly equivalent to the US or Indian corps-level units when compared by size and the number of troops (it is called as 'corps' in official Chinese announcement). In 1997, the PLA ground forces had 24 group armies, which were reduced to 18 by 2012. These were further reduced to 13 group armies and re-numbered from 71–83 in the latest round of the military reforms (Zhang, 2017). Some of the divisions within the group armies, while reduced, were converted into brigades and transferred to the paramilitary forces, army aviation units and reserve forces. The reforms also fast-tracked the process of creating smaller brigade-level combat units. Dennis J. Blasko notes that no divisions and regiments are directly subordinate to the group army HQ, and it only commands brigades. All divisions previously assigned to the group armies, except one, were converted into three types of brigades—heavy, medium and light brigades

**Table 2.** Troop Reduction under Xi's Military Reforms

Services	Number of Personnel	
	2015	2019
Ground forces	1,600,000	975,000
Navy	235,000	250,000
Air force	398,000	395,000
Rocket force	100,000	120,000
SSF	N/A	145,000
Other	N/A	150,000
Total active personnel	2,333,000	2,035,000
Paramilitary	660,000	660,000
Reserve	510,000	510,000

**Source:** IISS (2015, 2016, 2017, 2018, 2019, 2020).



(Blasko, 2021, pp. 14–15). Brigadisation, however, is not a new phenomenon for the PLA. For instance, in 1996–1997, the PLAA had 102 infantry and tanks divisions and 20 brigades, excluding border and coastal units responsible for early warning and defence. But in 2012, China had 30 infantry and armoured divisions, and 48 brigades (Pollpeter & Allen, 2012, p. 262). This process picked up greater pace under Xi, and many smaller units like brigades, army aviation units and special operational forces were created from more prominent structures like divisions. These changes aimed to enhance the PLA's mobility, achieve quick turn-around time for deployment, increase efficiency and attain combat-effectiveness.

Similarly, the PLAAF claimed in 2011 that it had undertaken a brigadisation process for its combat and ground attack aircraft units (Allen & Morris, 2017; Trevethan, 2019). In 2010, the Air Force had 29 operational air divisions—20 fighters, three ground, three bomber and three transport divisions (Trevethan, 2019; Sae-Liu, 2000, p. 41). The process fast-tracked after Xi initiated the second phase of the military reforms in 2017, and by early 2018, as Lawrence Trevethan documents, all the fighter or ground attack regiments and divisions were converted into brigades. Furthermore, the PLAAF abolished its three Airborne Corps divisions, upgraded their attached regiments into brigades and also created several unmanned aerial vehicle (UAV) brigades. All these newly created ground attack and fighter brigades were placed under the newly configured four bases, which, under the current reforms, were created from two existing division leader-grade and two corps deputy leader-grade command posts under Shenyang, Lanzhou, Nanjing and Guangzhou Military Region Air force HQs. But the Air Force still retains all its bomber, transport and specialised aircraft divisions (Trevethan, 2019, p.6). The rationale for the conversion of divisions into brigades could be to commission new type of aircraft, retire older fleet, match the force structure with new kinds of missions, reduce personnel and help transition from MRs to TCs. The brigadisation also complements the PLAAF's 2004 vision, which was cited in *The 2013 Science of Military Strategy* and China's 2015 defence white paper, to transition into a 'strategic and long-range air force' (Xiao, 2015).

In case of the Navy, the PLA expanded its Marine Corps in 2017—from two brigades overlooking the SCS outposts to eight brigades (combined arms + Special Operation Force + helicopter brigades), probably amounting to over 30,000 personnel (Blasko & Lee, 2019). These were then distributed among the three newly formed theatre commands with the naval fleets and China's first overseas military base at Djibouti, which was inaugurated in 2017. These changes align with its gradual shift of focus, as claimed in the 2015 defence white paper, from 'offshore water defense' to a combination of 'offshore water defense' and 'open sea protection' (SCIO, 2015).

### *Changes to Defence Financing and Weapons Acquisition*

Throughout Xi's tenure, there has been a marked shift in China's defence expenditure, with a greater focus on developing firepower. This is reflected in the

changes in spending priorities. Mapping defence expenditure is one of the most credible ways to assess capability enhancements. Given the opacity surrounding China's defence budgets, this, of course, is a challenging task. Moreover, Beijing's defence budget data suffers from three distinct problems: lack of transparency, known omissions in key military-related spending categories and unreliability (Nouwens & Béraud-Sudreau, 2020, p. 5). This has often led to analysts adopting more hawkish estimates. We, however, opt for a conservative approach for our assessment and rely on official data put out by China's government agencies.

As evident from Table 3, China's defence expenditure increased from \$106.05 billion to \$183.77 billion from 2012 to 2020 (SCIO, 2013). The defence expenditure has increased by more than 50% in less than a decade. The 2019 defence white paper also provides data on the breakup of expenditure (SCIO, 2013). It is divided into three parts: personnel expense, training and sustainment expense, and capital expenditure (CapEx).

The share of CapEx in China's defence expenditure, as shown in Figure 2, expanded consistently from 2010 onward, crossing the 40% threshold in 2015 (SCIO, 2013). This implies that throughout this period, a greater proportion of funds from China's total defence expenditure was spent on new equipment development and procurement.

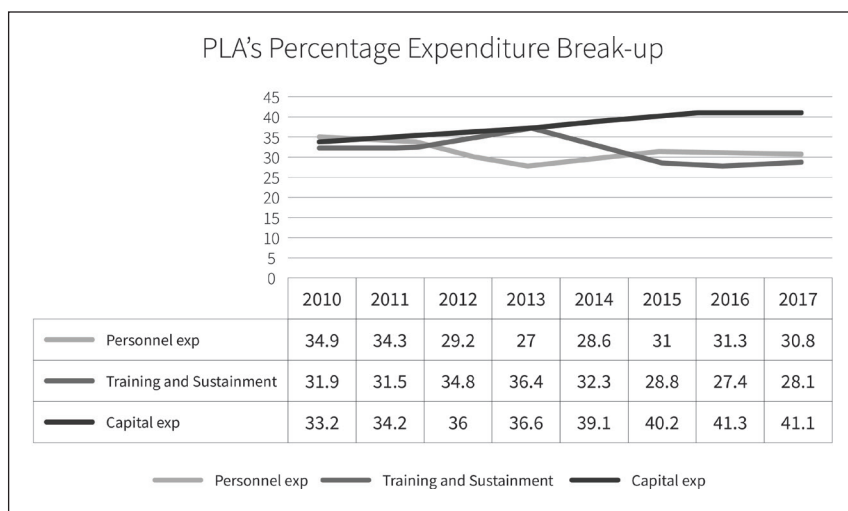
Examining the types and number of new weapons acquired by the three conventional services during this period, the PLAN and PLAAF have been the biggest beneficiaries of this modernisation drive. In comparison, fewer resources have been allocated to the PLAA. Figures presented in Table 4 provide some examples to underscore this point. For instance, it shows that the PLAN is looking to commission eight Type 055 cruisers. Based on Daniel Caldwell, Joseph Freda and Lyle J. Goldstein's estimate, a single Type 055 cruiser costs approximately \$852 million (Caldwell et al., 2020, p. 5). So for three years, from 2014–2016, which is a reported turnaround time to construct the first Type 055,<sup>1</sup> roughly \$300 million every year was utilised of the capital expenditure of \$52.55 billion, \$58.18 billion and \$60.69 billion (Reuters Staff, 2020). Similarly, the PLAAF has been investing in the development of a fleet of J-20 stealth aircraft. While data on the

**Table 3.** Year-wise Defence Expenditure

Years	Total Defence Expenditure (\$ Billion)
2012	106.05
2013	120.49
2014	134.57
2015	145.71
2016	146.85
2017	154.32
2018	166.96
2019	172.16
2020	183.77

**Source:** Compiled from China's defence white paper 2019 and the Report on the Execution of the Central and Local Budgets: 2018, 2019 and 2020.

**Note:** Conversion from Yuan to US Dollar is based on average annual rates calculated from 'Dollar Yuan Exchange Rate– 5 Years Historical Chart'.



**Figure 2.** PLA's Year-wise Expenditure Break-up from 2019 Defence White Paper

**Source:** SCIO (2019).

number of these jets being developed is unclear, only seven had been displayed together at one time until 2017 (Yan, 2019). Given that the estimated cost per unit for a J-20 aircraft is approximately \$110 million, excluding R&D expenses estimated at \$4.4 billion; this implies that at least \$770 million was spent from 2011 to 2017 on these jets (Collins & Erickson, 2011, p. 4; Huang, 2016; Zhen, 2018). Furthermore, by 2021, China deployed at least 144 J-20 aircraft in four aviation brigades—as one brigade needs a minimum of 36 aircrafts (Chan, 2021). This means that China has at least spent \$15.84 billion in the past 11 years on the J-20 aircraft.

Type 055 and J-20 are just two examples of China's multiple defence manufacturing and acquisitions from the last decade (check Table 4 for more). Data suggest that more money is spent on the PLAAF and PLAN than the PLAA. This increased focus on acquiring greater firepower for the Navy and Air Force aligns well with the Chinese leadership's objectives of developing a blue-water navy and strategic, long-range stealth air capabilities (SCIO, 2015).

### *Weapons Allocation Across Commands*

As mentioned earlier, increase in China's defence expenditure have enabled the development and procurement of modern vessels, aircraft and weaponry. However, data also suggest that there has been a subtle change in the allocation of these weapons and force deployment under the new theatre command system. Primarily, it appears to be based on a calibration of threat perceptions, responsibilities allocated to each theatre command and China's strategic guidelines (Fravel, 2015). For instance, the ETC acquired a marine brigade after the formation of the

**Table 4. Breakdown of China's Recent Defence Acquisitions**

S. No.	Name	Weapon Type	Service	Number	Estimated Cost Per Piece	Breakdown	
						Years per Piece/Years for Commissioning of the First Piece	Cost Per Year for One Piece
1	Type 055	Cruiser	PLAN	8	\$852 million	3 2014–16	\$300 million
2	Type 001A	Carrier	PLAN	1	\$9 billion	5 2013–2017	\$1.8 billion
3	Type 002	Carrier	PLAN	1	Data not available	Data not available	Data not available
3	Type 052 D	Destroyer	PLAN	24	\$600–\$800 million	2  2012–2014	\$300–400 million
4	Type 054 A	Frigate	PLAN	30	\$300–\$400 million	2  2006–2008	\$150–200 million
5	Type 056	Corvettes	PLAN	60	\$100–\$150 million	2 2012–2013	\$50–75 million
6	Type 075	Landing helicopter dock	PLAN	3	Data not available	Data not available	Data not available
7	Type 901	Replenishment ship	PLAN	2	Data not available	2  2015–2017	Data not available
8	Type 094	SSBN	PLAN	6*	\$2 billion*	6 2001–2007*	\$300–350 million
9	J–20	Stealth aircraft	PLAAF	7*	\$100–\$120 million*	2  2009–2011	\$50–55 million
10	H–6N	Bomber jet	PLAAF	Developmental stage	Data not available	Data not available	Data not available
11	J–31/FC 31	Stealth/Carrier-based fighter	PLAAF/PLAN	Developmental Stage	\$70 million*	Data not available	Data not available
12	Su 35 Flanker E*	Combat jet	PLAAF	24	\$104–\$105 million*	N/A	N/A
12	Y–20	Strategic transport aircraft	PLAAF	20*	\$160–\$250 million	Unknown/2006–2013	Data not available
13	IL–76 MD/TD	Strategic transport aircraft	PLAAF	24*	Data not available	Data not available	Data not available
14	IL–78 tanker	Tanker	PLAAF	4*	Data not available	Data not available	Data not available
15	PCL 181	Vehicle mounted howitzer	PLA GF	Data not available	\$5 million	Data not available	Data not available
16	T–15/ZTA–15	Light tanks	PLA GF	200	Data not available	Data not available	Data not available
17	Z–20	Attack helicopters	PLA GF*	Data not available	Data not available	Data not available	Data not available

**Sources:** Compiled from multiple Chinese and English sources.

PLA Marine Corps in 2018. The number of corvettes with the ETC, in the past five years, has also increased from 5 to 19 (International Institute for Strategic Studies [IISS], 2015, 2019, p. 263). The command also commissioned two landing platforms/docks (LPDs), formed an Airborne Early Warning & Control (AWE&C) programs regiment with KJ-500 early warning aircraft and an Anti-Submarine Warfare (ASW) regiment with KQ-200 maritime patrol aircraft (IISS, 2019, p. 218; Defence Intelligence Agency, 2019, p. 37). Most of these changes imply a focus on expeditionary capacity, which could come into play in case a decision is taken to take Taiwan by force.

Likewise, the STC also added three LPDs besides ASW and AWE&C regiments and a marine brigade (IISS, 2019, p. 263).<sup>2</sup> In addition to this, it has deployed a surface-to-air missile (SAM) brigade along with a naval aviation unit and a few land-based SAM batteries, such as the HQ-9 on the Woody Island in the SCS (Reuters Staff, 2018). STC's Air Force also added three electronic warfare (EW) regiments with advanced Y-8 CB/G/XZ capabilities (IISS, 2019, p.232). Besides, all of the Jin-class submarines are also based at the Yulin naval base along the southern coast of Hainan Island (Cook, 2017). This theatre has greater firepower and expeditionary capabilities than the ETC, given that it overlooks the disputed SCS and would most likely be responsible for Indian Ocean Region (IOR) missions in the future. STC is also mandated to support the ETC in case of Taiwan contingency (Li, 2017).

The WTC, meanwhile, is the biggest beneficiary of China's limited ground force modernisation. The advanced T-15 tanks, PCL-181 howitzers, Z-20 helicopters and GJ-2 drones, which were displayed for the first time at the 2019 military day parade, are deployed under the WTC, TMD and XMD (Desai, 2021b; *Hindustan Times*, 2021). These are unique weapons developed especially for mountainous terrain and harsh climate found in Tibet along the Sino-Indian border. Notably, such specialised equipment was commissioned with the TMD after the 2017 Doklam stand-off and with XMD's South Xinjiang Military District, which borders Ladakh, in 2021 during the ongoing 2020 military stand-off (Chan, 2020). The latest analysis and reports indicate that these weapons are now fully integrated with the TMD and are deployed to address the Indian contingency along the Sino-Indian border (Zhen, 2020).

Moreover, the TMD and XMD have also acquired an additional helicopter brigade each. The TMD also commissioned five new militia units, that is, air patrol, polar communications, plateau fighting, express delivery and extreme climbing teams in Lhasa, in 2020. These units are mandated to patrol and perform emergency rescue missions along the Sino-Indian border (*Global Times*, 2020). Additionally, a recent PLA Daily report hints that China has 'informatised' a combined arms brigade under the TMD, perhaps the first CAB to be 'informatised' under this military district (*PLA Daily*, 2021).

Similarly, NTC is home to one of China's two aircraft carriers. Like the ETC and STC, the NTC also has two marine brigades. But, unlike the STC and ETC, the NTC's air force inventory does not include a bomber division. Similarly, the NTC does not have any LPDs, implying limited expeditionary capabilities. But in the last few years, the NTC has deployed an EW regiment with Y8/Y8 CD/

Y8 G medium size ,medium range transport aircraft and an intelligence surveillance and reconnaissance (ISR) regiment with JZ-8F interceptor aircraft (IISS, 2019).

Finally, the CTC, which supports other theatre with logistics facilities, houses the PLAAF's 36th bomber division, which was previously with WTC, and a bomber brigade with H6-N aircraft.<sup>3</sup> It also hosts the 13th transport division, which is regularly described as country's premier unit for overseas air transport, personnel recovery, participation in international exercise and delivery of HA/DR supplies (IISS, 2019, p. 264). This was a significant addition to CTC after reforms; however, the 13th Air Transport Division has retained its role despite the change in the host theatre command post the military reforms. Besides, China's Airborne Corps based out of Hubei fall under CTC's jurisdiction.

It is also important to note is that in 2017, the PRC set up its first military outpost in the IOR at Djibouti (Reuters Staff, 2017b). This established China's permanent naval presence in the IOR, which is critical for trade and energy security. The installation in Djibouti is being used by Chinese peacekeeping forces in Africa and is a vital touch point and PLAN vessels to refuel while carrying out anti-piracy operations in the western IOR (Dutton et al., 2020, p. 34).

### *Changes to Training Regimes*

Multiple scholars have repeatedly highlighted the PLA's limited combat experience (Heath, 2018). The last conflict that the PLA fought was in 1979 against Vietnam. In addition, over the years, there has been a chorus of criticism of the Chinese armed forces' lack of military preparedness (Blasko, 2015; *People's Daily*, 2014). The PLA has been criticised for the poor quality of its personnel employed, training regimes and logistics capabilities. It is also often charged with suffering from *peace disease, peacetime habits and peace problems* (Blasko, 2019c; Gill et al., 2020, pp. 5–26). Put simply, these phrases imply that PLA soldiers tend to display a peacetime attitude during training, which hurts war-time combat-readiness. These are long-term maladies; however, little has been done over the years to address them.

Back in 2006, an internal PLA assessment highlighted what is referred to as *the Two Incompatibles* or *the Two Gaps*. These were as follows: (a) the PLA modernisation was inadequate to win local wars under informatised conditions and (b) the PLA's military capabilities are yet to live up to its historic missions (Chase et al., 2015, pp. 69–73). These *Two Incompatibilities* were updated in an internal assessment in 2013, which provided a scathing indictment of the PLA's modernisation. The assessment highlighted *the Two Inabilities*, which focused more on the quality of the PLA leadership and their loyalty to the Party (Blasko, 2019c). It also cited *the Two Big Gaps* indicating that the ongoing modernisation didn't match with the PRC's security requirements and was also not at par with the world's advanced militaries (Blasko, 2019c; *People's Daily*, 2013). Some of the other assessments included *The Three Whethers and The Five Incapables*, which questioned the leadership's battlefield capabilities (*PLA Daily*, 2014, 2015).

Moreover, the PLA is struggling with a demand–supply mismatch between trained and skilful soldiers with newer, modern and advanced weapons. This is more pertinent to technology-centric services such as the PLAN, PLAAF and PLARF. Similarly, the PLA faces a shortage of trained and qualified officers in leading and managing joint operations. In April 2016, Xi highlighted this, demanding that the lack of officers with deep-knowledge and experience of joint operations be addressed (Wuthnow & Saunders, 2019, p.31). In order to do so, the HQs had to set up a *three-year plan for the construction* (Shi, 2014, p.3). At the end of the three-year programme, an officer must take a test to receive job certification for future promotion (Blasko, 2019d; *PLA Daily*, 2016). Furthermore, PLA leadership realised that the officers aren't fully trained yet to handle the combined arms battalions despite the transition that's been underway for nearly a decade. In addition to these problems, there are individual service-centric demands that have impacted the combat-readiness of the forces.<sup>4</sup>

While the CCP leadership over the years has acknowledged these problems, Xi has demanded that the PLA should overcome it by training 'harder in realistic conditions' (*Global Times*, 2019). The 2018 Outline of Military Training and Evaluation (OMTE) also cites these problems along with *the Two Inabilities* highlighted in Xi's assessment as important reasons for the PLA's training reforms (Wu, 2018). Several steps have been taken at the bureaucratic and service levels to improve the quality of training. For instance, the GSD military training department was replaced by the CMC training management department (Wuthnow & Saunders, 2017, p. 31). An elevation to the CMC-level indicates Xi's direct control and supervision over PLA training. New full-time training monitoring and inspection teams were set up at theatre, service and military unit levels to provide critical assessments of the training drills and military exercises (Wu & Liang, 2016).

At the force level, the PLA, in 2014, introduced a permanent blue-force from its 195th Mechanised Infantry Brigade at the Zhurihe military facility, Inner Mongolia, where the annual Stride exercises are conducted (Logan, 2017). The 2014 Stride exercise was aimed to shake the PLA out of its sense of peacetime complacency and remove the safety blanket of operating in familiar surroundings. It compelled PLA units to fight in locations not of their choosing and against a superior foe (Li, 2015).

Following the establishment of a dedicated blue force at the military facilities in Zhurihe, more such forces were formed at theatre and service levels (Wang & Zhang, 2015). Newer elements such as night-time exercises, technological reconnaissance, aerospace reconnaissance and electromagnetic interference have been introduced in military exercises, and the red force, unlike in the past, is made to undertake both offensive and defensive operations (*Xinhua.*, 2016). Since Xi's assessment in 2013 questioned the role of the PLA leadership, these exercises now assign more weightage to the commander's performance' (Logan, 2017). The Army's *Stride* and *Firepower*, Air Force's *Golden Helmet*, *Golden Dart*, *Blue Shield* and *Red Sword*, Navy's *Zhanlan*, Rocket Force's *Heaven's Sword* and the newly started JLSF's *Joint Logistic Missions* now form the backbone the PLA's annual military exercises (Allen & Allen, 2018, p. 2).



More recently, the PLA appears to have prioritised the use of artificial intelligence (AI) in training commanders for decision support through war-gaming. Although the PLA's use of AI dates to the 1980s and 1990s, the applications have increased since the introduction of the *New Generation Artificial Intelligence Development Plan* in 2017. The plan called for the use of AI in military training, military technology, decision-making and military deduction (*war-gaming and operations research*), among other applications (SCIO, 2017). For instance, the China Institute of Command and Control (CICC) co-sponsored the first national AI and War-gaming Forum at the National Defense University's (NDU) Joint Operations Academy in September 2017 (Kania, 2019). The PLA also introduced the exercise *Qibing* in 2018—a skill-based competition that tests intelligence, surveillance, reconnaissance (ISR), special operations, information support, electronic countermeasures and Army aviation forces. Furthermore, the SSF also started the *Luoyang* series of force-on-force exercises, with the SSF base pitted against Army, Air Force and Rocket Force in a complex electronic warfare environment (Defence Intelligence Agency, 2019, p. 24). These developments indicate Xi's focus on force-on-force exercises, skills-based competition and strengthening training for military commanders since the military reforms in 2015.

More importantly, abandoning Mao's directive that China would never participate in foreign military exercises and would never have a base abroad, the PLA began participating in the bilateral and multilateral exercises since 2002 (Saunders, 2020, pp. 181–210). But its participation in bilateral, trilateral, regional and multilateral military exercises increased significantly from 2014 onward (Saunders & Shyy, 2019, pp. 207–227). Among all services, PLAN and PLAA's participation is the most with 46.6% and 41.3% respectively in bilateral and multilateral military exercises. The PLA AF participates in 8.7%, and the data for PLA RF is not known. Of these, only 6.5% are joint exercises with more than one PLA services (Saunders, 2020, pp. 196–197). It also participates in military operations other than war (MOOTW), which includes search and rescue, humanitarian rescue and disaster relief (HADR), medical exercises and basic military skills (Saunders & Shyy, 2019, pp.207–227). Such joint operations with the foreign army and on foreign territory helps the PLA compensate for its lack of real combat experience and familiarise itself with operations, tactics, and systems of other forces and geographies. However, primarily since 2020, after the break-out of the COVID-19 pandemic, the PLA has engaged in joint military exercises with select foreign countries such as Russia, Pakistan, Cambodia, and Thailand.

## **Impact of Reforms on China's National Security Objectives**

This section evaluates the efficacy of military reforms detailed earlier in enhancing the Chinese state's capacity to achieve the stated and revealed national security objectives. The objectives listed here have been identified based on a series of defence white papers published by the State Council over the years and through speeches given by the key Chinese leaders (Embassy of the People's Republic of

China in the United States, 2014; 2011; SCIO, 2013, 2015; SCIO, 2017, p. 48, 2019; *Xinhua*, 2014). They are as follows:

1. Deter Aggression and Safeguard Political Security
2. 'Reunification' with Taiwan
3. Safeguard Sovereignty and Territorial Integrity
4. Develop A2/AD Capabilities and Dominate the Western Pacific
5. Secure and Safeguard Overseas Interest
6. Make the PLA Combat Ready
7. Win Informatised Local Wars
8. Safeguard Security Interests in the Outer Space, Electromagnetic Realm and Cyberspace

Xi's military reforms had clear political dimensions. Measures such as military-bureaucratic restructuring and revamping military education were aimed at establishing greater Party control over the PLA and ensuring the PLA's political loyalty to the core leadership (Mulvenon, 2015). The four bureaucratic departments—the GSD, GPD, GLD and GAD—had developed greater authority and control over the forces, especially in the last two decades during Jiang Zemin and Hu Jintao's tenures. This had resulted in rampant corruption and abuse of power. Another key driver of corruption was the PLA branching out into commercial activities amid the new market reforms in the 1980s. In 1998, then chairman Jiang Zemin tried to address this problem by dissolving the military-business complex, but by then, the rot had set in too deep and had become pervasive (Mulvenon, 2001).

The restructuring helped Xi to strengthen his position over the PLA and weed out corruption within the forces. By chairing 'CMC's Leading Small Group of National Defense and Military Reforms', which was responsible for the implementation of the reforms process, and appointing himself as the commander-in-chief of the Joint Operations Command Centre, Xi made sure that his authority was unchallenged. This, along with the conviction of the high-ranking military officials through the anti-corruption campaign, was indicative of the control that the reforms allowed him to establish. At the same time, since coming to power, Xi promoted his loyalists and protégés to important positions in the CMC, PLA and Party. This enabled him to strengthen his authority, ensure implementation of his policies, deter political aggression and safeguard political security.

The 2015 defence white paper warned about the formidable threats that the Party faces, internally and externally, due to the 'anti-China forces' attempting to instigate 'colour revolutions' (SCIO, 2015). By bringing the PAP under CMC's jurisdiction, Xi has ensured greater control over restive outer regions such as Tibet and Xinjiang. Meanwhile, changes to the PLA's force structure along with targeted modernisation have enhanced the PRC's capabilities in case of a Taiwan contingency. The creation of the ETC has enabled focused capacity development, in case Xi decides to use the force for 'reunification'. The increased number of joint drills and exercises surrounding Taiwan, newer amphibious capabilities and the formation of the PLASSF have enhanced China's coercive capacities towards

its primary strategic direction. But the political cost of the use of force, particularly given the potential US intervention, remains extremely high (Blanchard & Jennings, 2010).

In case of the South and East China Seas, the PLA has developed significant capacities by creating direction-specific theatre commands along with commissioning amphibious vessels and smaller ships such as frigates and corvettes to further its interests. In the SCS, it has militarised artificial islands and deployed submarines, SAMs and LPDs. Its assertion of sovereign claims in the region, increased military drills and expansion of activities using armed maritime militia have made the SCS a potential tinderbox. The PLA's enhanced capacity and confidence in the region is evident from the actions it took in 2019 and 2020, as it has challenged the territorial claims of all key regional rivals. This assertion, however, has also resulted in greater pushback from states like the United States and Australia. In essence, while the PLA today has greater capabilities allowing it to assert the PRC's territorial claims in the region, coercive exercises result in the emergence of counter-balancing forces. This is likely to breed greater insecurity for the PRC. Similarly, new weapons deployment and increased military drills, especially after the 2017 Doklam standoff, have led to greater tensions on the disputed Sino-Indian and Sino-Bhutanese borders. But, despite improved capabilities, exercising sovereignty over the contested territories on the India–China border and in areas within the SCS and ECS will require political rather than military solutions, which remains a challenge for the foreseeable future.

The 2015 defence white paper also emphasised on China's changing strategic requirement, calling on the PLAN to gradually shift its focus from 'offshore water defense' to a combination of offshore water defense' and 'open sea protection'. Other official writings have indicated a need for the PLA AF to convert its fleet into a "strategic force" with long-range capabilities. Put simply, multiple White Papers since then have envisioned China's transition from a regional to global power, while calling on the PLA to work towards capacities to secure overseas interests. This outward focus is indicative of the Chinese leadership's efforts to increase PLA's ability to secure interests in its periphery. Over the years, the PLA has invested in sea denial tools such as submarines, SAMs, anti-ship ballistic missiles, integrated and layered sensor systems, targeting networks, bomber and fighter aircraft, mines, advanced air defence systems, and improved cyber and electronic warfare capabilities (Lague & Lim, 2019). These A2/AD capabilities challenge the enemy's operational capabilities near China's periphery in case of a conflict. Admiral Philip Davidson, former Commander, the United States Indo-Pacific Command (USINDOPACOM), reiterated this in his 2019 testimony before the Senate Committee on Armed Services. He warned, 'Over the last two decades, adversaries have rapidly closed the gap in many of the areas that used to be clear asymmetric advantages for the United States, encroaching upon USINDOPACOM's ability to deter conflict or prevail in armed conflict should deterrence fail' (Davidson, 2019). Irrespective of the PLA's enhanced capabilities, the United States remains a key, if not the dominant, player in the Western Pacific Ocean and enjoys operational advantages when it comes to joint-force missions in the region.

More importantly, China's increased focus on manufacturing long-ranged vessels and strategic aircraft, as reflected from its defence spending breakdown, highlight its objective to secure and safeguard its overseas interests. These interests range from protecting vital sea lanes of communications from piracy and enemy blockades to protecting Chinese investments, workers and assets in the IOR, and even supporting peacekeeping missions in Africa. Increased naval activities in the IOR such as the rise in number of maritime military exercises and the opening of the PLA's first overseas military base at Djibouti underline the steps taken in this direction. But this remains a work in progress. The PLA still does not have either the vessels for sustained far seas deployment or the basing facilities. In addition, it lacks extensive strategic airlift and open sea refuelling capabilities, and it has limited operational experience. But, like in the case of the SCS, PLA's modernisation and power projection capabilities are rapidly leading to the emergence of counterbalancing forces in the IOR, as evident by the evolving American Indo-Pacific strategy.

Similarly, concerns over the PLA's combat readiness have led to a shift in military education and training, with emphasis on ensuring political integrity and enhancing professionalism. Intensive military drills in 'realistic conditions' and increased participation in bilateral and multilateral military exercises are aimed to compensate for the PLA's lack of wartime experience. The formation of smaller brigade-level units, which started under Jiang but picked up pace under Xi, enables the PLA to enhance operational flexibility and increase efficiency. Military exercises also help personnel to get acquainted with modern weaponry and platforms that the PLA is commissioning. Furthermore, the institutionalisation of blue forces across various services have also contributed to scaling-up the rigour in military training to attain combat readiness. Together these changes do indicate a relatively more combat-ready force than earlier. Finally, in the context of safeguarding security interests in newer domains such as outer space and cyberspace, much has changed in the recent past. The PLA has commissioned advanced precision-guided weaponry, improved naval and air capacities, upgraded PLARF, established PLASSF, and is developing newer launch vehicles and early warning capabilities. In addition, the creation of a new Science and Technology Commission and Military Science Research Steering Committee has provided strategic guidance. However, all these cannot substitute the actual combat experience, which the PLA lacks.

The efficacy of these reforms can only truly be tested on the battlefield once China indulges in a conflict or war.

## Conclusion

This article identifies five broad areas of the PLA reforms, assesses their implementation and analyses the efficacy of reforms in enhancing Chinese Party-state's capacity to achieve stated and revealed national security objectives.

The assessment concludes that Xi's military reforms have significantly helped China further its national security interests. Nevertheless, the PLA continues to face major shortcomings. The reforms have made the PLA a modern, more confident and better equipped regional force. However, assessing these reforms in the context

of organisational and force capabilities and of specific national security objectives, it emerges that there remains much to be desired. First, due to improved force capabilities, the homeland is far more secure, but the PLA's ability to project power overseas remains extremely limited. Although there have been efforts to improve the PLA's overseas basing and mid-air and mid-sea refuelling capabilities after China's 2015 defence white paper directives, its ability to project power and sustain itself in the far seas would still be limited for a considerable time in the future. Second, the PLA now has a greater capacity to project power across areas where China has territorial disputes with other states. But the cost of using force to conclude the territorial disputes in China's favour remains extremely high. Finally, the increased military drills and enhanced force structure have likely enhanced operational efficiency and joint operations capacity, but the PLA's combat readiness remains to be tested on the battlefield.

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## Notes

1. The first Type 055 was launched in June 2017, while it was commissioned in January 2020. See Reuters Staff (2017) and PTI (2020).
2. Data available in IISS (2019, p. 263), but not in all previous four military balances indicating additions.
3. Compared from IISS (2015) and IISS (2019).
4. Service-centric demands are beyond the scope of this paper.

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