

Editorial

This year, the annual budget will be presented on 1 February, a break from the practice of presenting it later in the month. As always, it is eagerly awaited, coming as it does soon after the demonetisation exercise, to indicate the Government's priorities for the forthcoming financial year. The defence budget, which occupies a sizeable portion of the Finance Minister's outlay, is similarly awaited by a growing tribe of defence analysts and economists. Without indulging in speculation about what Budget 2017–18 would bring, this issue of the *Journal of Defence Studies* carries a detailed and incisive assessment by Vinay Kaushal: 'Indian Defence Budget: Challenging Times'. In the article, Kaushal examines the impact of financial allocations for the past decade, and particularly during the Twelfth Plan period, as also the implications of inadequate allocations for the future given the strategic requirements of the Indian military as an instrument of national power. In his in-depth analysis, amongst other things, he has also discussed the recurring inability of the defence ecosystem to fully utilise the allocated resources.

The government is making a great push towards digitisation as well and is encouraging citizens to use digital platforms for many things, including financial transactions both large and small. Over the past few years, we have seen the emergence of the Aadhar and a vast amount of information pertaining to the individual is already available and accessible in the digital format. Concurrent to the rise of vast amounts of digital data, there are legitimate concerns about the safety of such information. Munish Sharma analyses security implications of theft of this data in this issue, in an article titled 'Data Theft: Implications for Economic and National Security'. Sharma opines that with increasing digitisation of services, such as in the case of governance and banking, or the electronic means of conducting commerce or trade, a large amount of data is generated, stored, processed; this data also traverses over digital devices and networks. The incidents of data theft compromise the integrity of this data, which is at continuous risk from a myriad of threats

varying from hacktivists to nation states. When the data is classified or confidential, data breaches and thefts may have grave implications for economic and national security. The growing number of data theft incidents has emerged as a key cybersecurity challenge for policymakers and security practitioners. Sharma's article contemplates the common threat actors and their motivational factors, and analyses data theft instances from the last two years with regard to the implications for economic and national security.

Alex Waterman's contribution—'Perception Management in Asymmetric Warfare: Lessons for Democratic Practitioners from Ukraine (2014–16) and Gaza (2014)'—discusses how the perception management component of information warfare has long been recognised as an important tool of warfare, appearing in military doctrines worldwide. However, the challenges and opportunities of its practice in different political contexts have rarely merited substantive attention. Waterman examines the development and trajectory of two cutting-edge examples of contemporary information warfare practice: Russian information warfare in Ukraine (2014–present); and information warfare conducted by the Israel Defense Forces (IDF) up to and during Operation Protective Edge. The article explores their strategic and political context before drawing lessons that can be learned across these differing contexts, highlighting four key recommendations. It points towards the limited possibility of information control, highlights the central relationship between information and action, affirms the crucial role of security forces in conducting information warfare and highlights that perception management goes well beyond obvious target audiences.

In 'Is India's Nuclear Doctrine Credible?', Zorawar Daulet Singh questions whether the doctrine lags behind the security challenges confronted by India today. Does it have a credibility problem? He situates the question in the context of recent debates by former officials and analysts on India's nuclear doctrine that serve to highlight certain credibility problems. While two inter-related pillars of the doctrine—the pledge of 'No-First Use' (NFU) and the assurance of a 'massive retaliation' response to a nuclear strike—have been scrutinised, the backdrop shaping the debate is the pressing need to deter an escalation in Pakistan's sub-conventional war. A key question, says Singh, that policymakers must ask themselves is: are we seeking to find doctrinal solutions to deter a sub-conventional war at a different and higher level of the spectrum of violence than the domain that needs to be squarely confronted? If retaining

the option and capacity to blunt the so-called advantages of Pakistan's tactical nuclear weapons is part of a larger deterrence strategy against cross-border terrorism, then it is imperative to also debate doctrinal and military modernisation at the non-nuclear levels: specifically at the lowest rungs of the conventional and non-conventional spectrums of violence. Ultimately, if confronting Pakistani revisionism and sub-conventional offensives is the overarching security challenge then nuclear signalling would, by itself, contribute only partially to the overall problem. It needs to be accompanied with, or preceded by, substantial reforms at the lowest levels of the spectrum of violence.

Finally, the issue also carries a perspective piece by M. Matheswaran titled 'ALH Dhruv and the Indian Helicopter Industry: Unrealised Potential, Promises and Challenges'. Matheswaran opines that owing to the rapid growth of Indian economy in the last two decades, and the resulting growth in urbanisation and industrialisation, the Indian aviation environment has blossomed into a huge market with a huge potential to absorb a large number of helicopters in multiple applications. By 2030, India would require nearly 1,000 helicopters for its defence and paramilitary forces. The civilian market for helicopters, both in the government and private sectors, is likely to absorb nearly 2,000 helicopters. This is a huge potential that can be exploited by the Indian industries, both private and public, provided they move aggressively with technically oriented strategies to create appropriate competencies. Matheswaran takes us through the trajectory of helicopter manufacturing in India with a focus on the advanced light helicopter (ALH) Dhruv. Though excellent helicopter from a design and performance perspective, its fleet suffers from maintenance and safety-related problems and poor product support. Much of these, says Matheswaran, stem from poor programme strategy and management, inadequate development of indigenous supplier base, excessive import dependency for critical items and materials and lack of effective design and technology control.

The issue carries detailed book reviews on current titles. Soumya Awasthi reviews *Not War, Not Peace? Motivating Pakistan to Prevent Cross-Border Terrorism*; Tushar Srivastav reviews *Military Robots: Mapping the Moral Landscape*; and Manas Dutta reviews *Frontiers, Insurgencies and Counter-Insurgencies in South Asia, 1820–2013*.

