

III. Spending on military equipment by European members of the North Atlantic Treaty Organization

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The annexation of Crimea by the Russian Federation and the rise of the Islamic State in 2014 was a pivotal moment for the security environment of the European members of the North Atlantic Treaty Organization (NATO). It significantly heightened the level of threat perceived by NATO members and led them to reinforce the military element of their security policies.¹

As one of the actions to address these perceived threats, NATO members included a pledge to increase their military burdens—that is, military expenditure as a share of gross domestic product (GDP)—to 2 per cent in the summit declaration after their summit meeting in Newport, Wales, in September 2014. Although this guideline had been discussed since 2002, inclusion in a summit declaration was unprecedented.² At the Wales summit, NATO members also publicly pledged to spend at least 20 per cent of their military expenditure on equipment.³ Since then, numerous discussions have focused on the 2 per cent military burden guideline.⁴ However, there has been limited discourse on the 20 per cent equipment spending pledge.⁵ This section thus maps and assesses the trends in both military burden sharing and equipment spending as a share of total military expenditure in European NATO members since the 2014 Wales summit.

The section first summarizes NATO's threat perceptions in order to identify official rationales for the two military expenditure guidelines. It then provides an overview of trends in the military expenditure of European NATO members and the 2 per cent guideline. It continues by mapping the changes in spending on equipment as a share of total military expenditure for European NATO members. The focus is on the five member states with the

¹ NATO, *The Secretary General's Annual Report 2014* (NATO: Brussels, 2015), p. 3.

² Dowdy, J., 'More tooth, less tail: Getting beyond NATO's 2 percent rule', eds N. Burns, L. Bitounis and J. Price, *The World Turned Upside Down: Maintaining American Leadership in a Dangerous Age* (Aspen Institute: Washington, DC, 2017), pp. 151–65.

³ North Atlantic Council, Wales summit declaration, 5 Sep. 2014, para. 14; and Mesterhazy, A. (rapporteur), *Burden Sharing: New Commitments in a New Era*, NATO Parliamentary Assembly, Defence and Security Committee, Sub-committee on Transatlantic Defence and Security Cooperation (NATO Parliamentary Assembly: Brussels, 17 Nov. 2018), pp. 2–4.

⁴ E.g. Blum, J. and Potrafke, N., 'Does a change of government influence compliance with international agreements? Empirical evidence for the NATO two percent target', *Defence and Peace Economics*, published online 5 Feb. 2019; Kim, W. and Sandler T., 'NATO at 70: Pledges, free riding, and benefit-burden concordance', *Defence and Peace Economics*, published online 10 July 2019; and Richter, A., 'Sharing the burden? US allies, defense spending, and the future of NATO', *Comparative Strategy*, vol. 35, no. 4 (2016), pp. 298–314.

⁵ E.g. Béraud-Sudreau, L. and Giegerich, B., 'NATO defence spending and European threat perceptions', *Survival*, vol. 60, no. 4 (Aug.–Sep. 2018), pp. 53–74.

highest relative increases, with explanations of their changing expenditure decisions. The section closes by drawing conclusions.

NATO's threat perceptions and military expenditure guidelines

The European security environment changed fundamentally over the decade 2010–19, in particular after Russia's annexation of Crimea and the rise of the Islamic State in 2014.⁶ The threats and risks stemming from these shifts were reviewed at successive NATO summits in 2014 and 2016–19. The final declarations of these summits highlight two key areas of growing instability: to the east and to the south.⁷ The instability to the east is attributed mainly to Russia's 'aggressive actions', including in Ukraine, interference in election processes in European countries, and cyber and hybrid attacks. To the south the instability arises from the armed conflicts in Afghanistan, the Middle East and North Africa, the increased threat from Islamist militant groups, and their spillover into the refugee and migrant crisis.

Preceding these changes, there was a long-standing debate on burden-sharing within NATO, the essence of which is that European military spending is proportionately less than that of the United States.⁸ The intention to spend at least 2 per cent of GDP on the military dates back to 2002, when NATO members discussed the guideline as a non-binding target.⁹ They restated their willingness to work towards the 2 per cent guideline at the 2006 Riga summit.¹⁰ The changes in perceived threats and the US pressure on burden sharing came together in the Defence Investment Pledge made at the 2014 Wales summit.¹¹ This was a joint effort to reverse the declining trend in military expenditure among members and to increase their spending to 2 per cent of GDP (or maintain it at that level if it had already been achieved). This pledge included the aim of spending at least 20 per cent of military expenditure on major new equipment, including research and development, by 2024. The pledge has been reaffirmed at all subsequent summits, and at the 2017 summit the NATO leaders agreed to submit annual national action plans setting out how they intend to meet the pledge.¹²

⁶ On the armed conflict in Ukraine and tensions between NATO and Russia see chapter 5, section II, in this volume.

⁷ E.g. North Atlantic Council, Brussels summit declaration, 11 July 2018.

⁸ Cooper, C. A. and Zycher, B. *Perceptions of NATO Burden-Sharing* (Rand Corp.: Santa Monica, CA, June 1989); Mesterhazy (note 3), pp. 2–4; and North Atlantic Council (note 3).

⁹ Dowdy (note 2).

¹⁰ E.g. NATO, Meeting of the North Atlantic Council at the level of Defence Ministers, Press briefing, 8 June 2006.

¹¹ North Atlantic Council (note 3).

¹² NATO, 'NATO leaders agree to do more to fight terrorism and ensure fairer burden sharing', 25 May 2017.

Table 8.8. Trends in military spending by European members of the North Atlantic Treaty Organization, 2010–19

Expenditure figures are in US\$, at current prices and exchange rates. Changes are in real terms, based on constant (2018) US\$. GDP estimates are from the International Monetary Fund's World Economic Outlook database.

State	Military expenditure, 2019 (\$ m.)	Change in military expenditure (%)			Military expenditure as a share of GDP, 2019 (%)
		2010–19	2010–14	2014–19	
<i>Central Europe</i>	29 880	64	2.1	61	1.8
Albania	198	-6.0	-11	5.7	1.3
Bulgaria	2 127	165	-16	216	3.2
Croatia	1 009	8.8	1.5	7.2	1.7
Czechia	2 910	20	-18	46	1.2
Estonia	656	91	37	39	2.1
Hungary	1 904	62	-10	80	1.2
Latvia	710	176	5.9	161	2.0
Lithuania	1 084	232	20	176	2.0
Poland	11 903	51	13	33	2.0
Romania	4 945	154	18	115	2.0
Slovakia	1 865	68	-20	110	1.8
Slovenia	569	-22	-41	33	1.1
<i>Western Europe</i>	230 865	-1.6	-12	11	1.5
Belgium	4 818	-7.3	-8.5	1.4	0.9
Denmark	4 557	8.1	-16	28	1.3
France	50 119	3.5	-3.4	7.1	1.9
Germany	49 277	15	-7.7	25	1.3
Greece	5 472	-23	-34	17	2.6
Italy	26 790	-11	-20	11	1.4
Luxembourg	429	61	-6.5	72	0.6
Netherlands	12 060	9.8	-15	30	1.3
Norway	7 003	30	11	17	1.7
Portugal	4 513	1.7	-18	24	1.9
Spain	17 177	-7.1	-18	14	1.2
United Kingdom	48 650	-15	-16	-2.1	1.7 ^a
Total	260 745	3.1	-11	16	1.7

GDP = gross domestic product.

^a According to NATO's own expenditure data, the UK has achieved the 2% guideline. The SIPRI figure of 1.7% is based on the net cash requirements figures provided by the British Ministry of Defence (MOD). NATO reports figures that include numerous items that are not in the MOD budget. This has been noted by a parliamentary report as inflating military expenditure as a means for the UK to meet the 2% target. See British House of Commons, Defence Committee, *Shifting the Goalposts? Defence Expenditure and the 2% Pledge*, 2nd report of 2015/16 (House of Commons: London, 21 Apr. 2016); and Perlo-Freeman, S., *Fighting the Wrong Battles: How Obsession with Military Power Diverts Resources from the Climate Crisis* (Campaign Against the Arms Trade: London, Feb. 2020).

Sources: SIPRI Military Expenditure Database, Apr. 2020; and International Monetary Fund World Economic Outlook Database, Oct. 2019.

Towards the 2 per cent guideline

While all but seven European NATO member states had decreased their military expenditure between 2010 and 2014, all but one (the United Kingdom) increased their spending following the Wales summit (see table 8.8). Between 2014 and 2019, the military expenditure of the 24 European NATO states assessed here increased by 16 per cent in real terms, to \$261 billion.¹³ However, the increases in military expenditure were not uniform across sub-regions: the increases were particularly strong in the Central European NATO states. The combined military expenditure of these 12 NATO states increased by 61 per cent between 2014 and 2019 to \$29.9 billion. Most notable are the substantial increases by Bulgaria (216 per cent), Lithuania (176 per cent), Latvia (161 per cent), Romania (115 per cent) and Slovakia (110 per cent) in this five-year period.

The average military burden of European NATO states followed a similar pattern to overall expenditure: it increased from 1.3 per cent of GDP in 2014 to 1.7 per cent by 2019.¹⁴ Among Central European NATO states, the rise in military burden was even greater: from 1.3 per cent in 2014 to 1.8 per cent in 2019. Overall, the number of NATO countries that spent 2 per cent or more of their GDPs on the military rose from one in 2014 to seven in 2019—and six of the latter are in Central Europe.

During the period 2014–19, as military expenditure increased, most countries in Europe had also recovered from the financial and economic crisis that started in 2008.¹⁵ The improved national finances allowed European NATO states to increase their military expenditure in order to move towards the 2 per cent guideline.¹⁶ Thus, the rise in military burden was the result of increases in military expenditure outpacing economic growth, rather than being caused by static military spending in a shrinking economy.

Trends in equipment spending as a share of military expenditure

European NATO members have also taken steps to increase their equipment spending as a share of military expenditure. From 2014, the number of European NATO countries that spent more than 20 per cent of their military

¹³ Of the 29 NATO member states, 26 are in Europe. Two of these—Iceland and Montenegro—are excluded from this study since the former has no military expenditure and the latter only joined NATO on 5 June 2017. Two NATO members—Canada and the United States—are in North America, and Turkey is in the Middle East.

¹⁴ All averages calculated in the text are based on arithmetic mean.

¹⁵ Szczepanski, M., 'A decade on from the crisis: Main responses and remaining challenges', European Parliament, European Parliamentary Research Service, Oct. 2019.

¹⁶ E.g. Christie, E. H., 'The demand for military expenditure in Europe: The role of fiscal space in the context of a resurgent Russia', *Defence and Peace Economics*, vol. 30, no. 1 (2019), pp. 72–99.

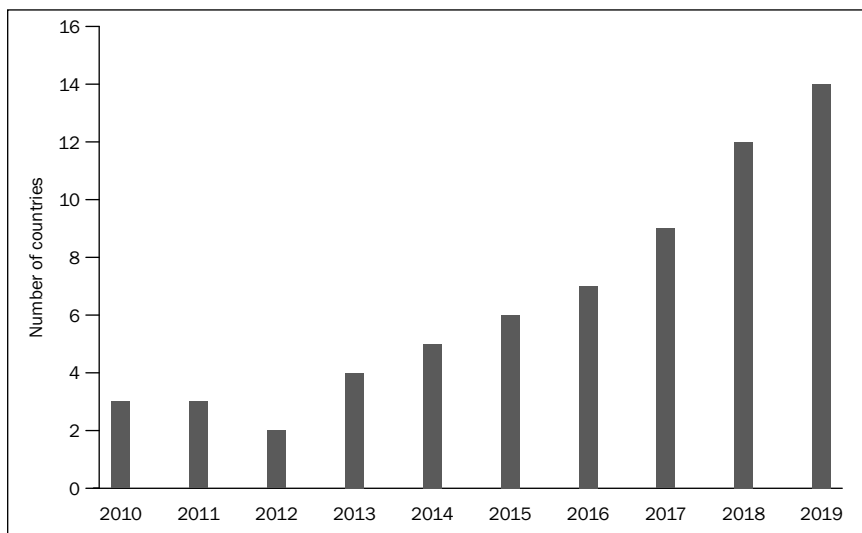


Figure 8.4. Number of European members of the North Atlantic Treaty Organization that reached the equipment spending guideline, 2010–19

Note: The bar chart shows the number of states (excluding Iceland and Montenegro) that spent more than 20 per cent of their military expenditure on equipment.

Source: NATO, 'Defence expenditure of NATO countries', Press release, Various editions, 2010–19.

expenditure on equipment increased at a fast pace: from 5 of the 24 European member states in 2014 to 14 in 2019 (see figure 8.4).

Twenty of the 24 European NATO countries increased both their total military spending and equipment spending as a share of their military expenditure between 2014 and 2019. Average spending on equipment as a share of total military spending rose from 12 per cent in 2014 to 23 per cent in 2019 (see figure 8.5). Equipment spending as a share of total military expenditure declined between 2014 and 2019 in four countries: Albania, Estonia, France and the UK. However, France and the UK both remained well above the 20 per cent NATO guideline in 2019, at 24 per cent and 22 per cent, respectively.

The highest increases in equipment spending as a share of military expenditure occurred in five Central European states: Bulgaria, Lithuania, Romania and Slovakia all more than doubled the share between 2010 and 2019, while Hungary's share almost doubled. Notably, this cluster of countries is in close geographical proximity to Russia, which has featured most prominently in NATO's threat assessments since 2014 (see figure 8.6). Underlying the upward trend in spending on equipment of these five countries were variations in the pace and extent of the increases (see figure 8.7). These five

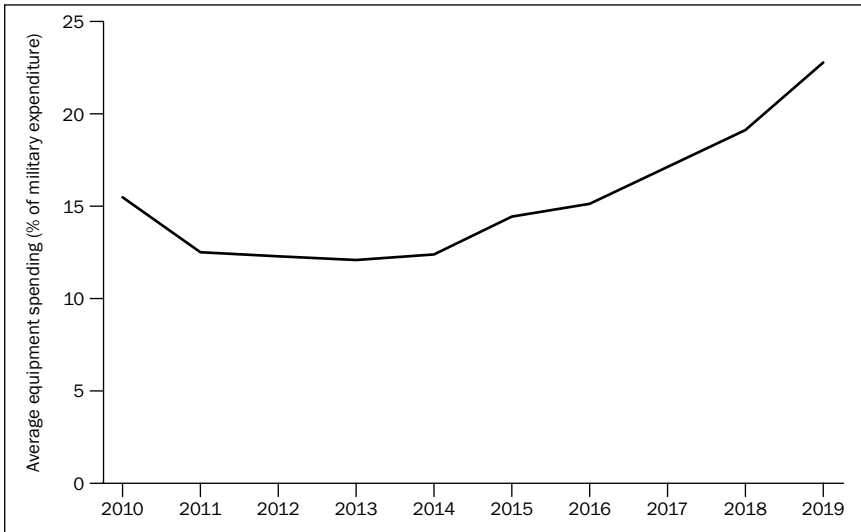


Figure 8.5. Average spending on equipment as a share of total military expenditure by European members of the North Atlantic Treaty Organization

Source: NATO, 'Defence expenditure of NATO countries', Press release, Various editions, 2010–19.

cases are described in detail below to explore possible explanations for their increases and the differences in the trends.

According to Bulgaria's 2015 armed forces development programme, the instability along NATO's eastern and southern flanks calls for the implementation of the decisions made at the 2014 Wales summit.¹⁷ Alongside the 'fundamentally changed security environment' and the NATO guidelines, Bulgaria's plan to increase its military burden to 2 per cent emphasizes the urgent need to modernize the equipment of the armed forces.¹⁸ Although the original plan aimed for a gradual increase over seven years, in 2019 Bulgarian military spending increased sharply—by 127 per cent—to reach \$2.1 billion. Similarly, while equipment spending as a share of military expenditure in the years 2010–18 was 6.8 per cent on average, it jumped from 9.7 per cent of total military spending in 2018 to 59 per cent in 2019. Both of these spikes were due to an acceleration in the \$1.2 billion procurement of eight new combat aircraft, which were ordered in June 2019 for delivery in 2024. Full payment for these was made in August 2019.¹⁹ Paying arms contracts upfront years

¹⁷ Bulgarian Council of Ministers, *Programme for the Development of the Defence Capabilities of the Bulgarian Armed Forces 2020* (Council of Ministers: Sofia, 30 Sep. 2015); p. 2. On developments in Bulgarian defence policy see Wezeman, S. T. and Kuimova, A., 'Bulgaria and Black Sea security', SIPRI Background Paper, Dec. 2018.

¹⁸ Bulgarian Council of Ministers, *National Plan for Increasing the Defense Spending to 2% of the Gross Domestic Product until 2024* (Council of Ministers: Sofia, 2017), p. 2.

¹⁹ Fiorenza, N., 'Bulgaria makes F-16 payment', *Jane's Defence Weekly*, 14 Aug. 2019.



Figure 8.6. Per cent change in equipment spending as a share of military expenditure by European members of the North Atlantic Treaty Organization, 2010–19

Note: The figure shows European NATO countries, other than Iceland and Montenegro, as of 31 Dec. 2019.

Source: NATO, ‘Defence expenditure of NATO countries’, Press release, Various editions, 2010–19.

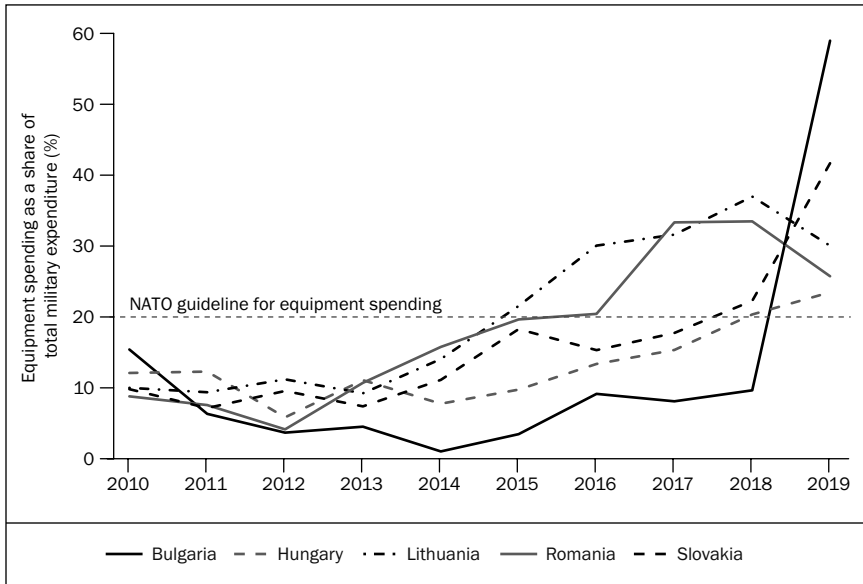


Figure 8.7. The five largest increases in spending on equipment as a share of total military expenditure by European members of the North Atlantic Treaty Organization, 2010–19

Source: NATO, 'Defence expenditure of NATO countries', Press release, Various editions, 2010–19.

before delivery is exceptional, as countries generally spread out payments over several years. It is therefore likely that Bulgaria's total military spending and its equipment spending will decrease substantially in 2020.

While Lithuania echoes the overall NATO security assessment, the first and foremost threat that it perceives is Russia's 'growing aggressiveness' and 'growing military capabilities'.²⁰ The country's military expenditure increased by 232 per cent in 2010–19. Equipment spending increased from 10 per cent of the military budget to 30 per cent in the same period. For Lithuania, arms procurement has been less about replacing old equipment—as it had little to start with—and more about building up military capability. The largest orders during 2014–19 were for 86 infantry fighting vehicles for \$435 million and two air defence systems for \$89.3 million.²¹

Romania's 2015 national defence strategy was also aligned to NATO's threat assessments.²² Romanian military expenditure increased by 154 per cent

²⁰ Lithuanian Ministry of National Defence (MND), *Lithuanian Defence Policy 2017*, White paper (MND: Vilnius, 2017), pp. 7, 13.

²¹ SIPRI Arms Transfers Database, Mar. 2019.

²² Romanian Presidential Administration, *National Defense Strategy 2015–2019: A Strong Romania within Europe and the World* (Presidential Administration: Bucharest, 2015). On developments in Romanian defence policy see Wezeman, S. T. and Kuimova, A., 'Romania and Black Sea security', SIPRI Background Paper, Dec. 2018.

between 2010 and 2019, while spending on equipment in 2019 was 193 per cent higher than in 2010. The increase in equipment spending has been particularly steep since 2013. The Romanian armed forces still operate equipment largely acquired before the end of the cold war. The 2015 national defence strategy and later policy documents emphasize the need for acquisition of new equipment, continuing the efforts to replace old and partly Soviet-origin equipment with equipment from Romania's NATO or European Union (EU) partners. A \$4.6 billion order for air defence systems from the USA in 2017 is probably the main reason for the significant increase in equipment spending in that year.²³

Slovakia's spending on equipment as a share of total military expenditure rose from 9.8 per cent in 2010 to 42 per cent in 2019. Its overall military expenditure rose by 68 per cent in the same period. The increase in military spending has been justified by a national security assessment that is generally in line with that of NATO.²⁴ To justify the increase in spending on equipment, the Slovak defence white paper of 2016 cites a need to replace outdated equipment.²⁵ In addition, replacement of Slovakia's arsenal of mainly Soviet- or Russian-sourced equipment needed to be accelerated because of EU restrictions on arms imports from Russia imposed following the annexation of Crimea.²⁶ The Slovak Ministry of Defence notes in particular the need for the replacement of Russian-supplied combat aircraft and Soviet-supplied air defence systems to reduce military technological dependence on Russia. This echoes the NATO goal formulated after 2014 to address dependencies on Russian-sourced military equipment.²⁷ The largest Slovak military procurement project in 2014–19 was a \$1.8 billion order in 2018 for 14 combat aircraft from the USA for delivery from 2023.²⁸ It is plausible that the steep increase in Slovak equipment spending in 2019 is related to this project.

As well as perceived threats from Russia, Hungary's security assessment has also been dominated by what its government considers a 'refugee and migrant crisis'. It argues that this requires that the military be used to guard borders and deployed in the Middle East and North Africa to 'manage problems at the root'.²⁹ Hungary's military expenditure increased by 62 per cent between 2010 and 2019 and its equipment spending increased by 94 per cent.

²³ Army Recognition, 'Raytheon to deliver Patriot Configuration 3+ air defense systems to Romania', 17 May 2018; and US Defense Security Cooperation Agency, 'Romania: Patriot air defense system and related support and equipment', News Release no. 17-35, 11 July 2017.

²⁴ Slovak Ministry of Defence (MOD), *White Paper on Defence of the Slovak Republic* (MOD: Bratislava, 28 Sep. 2016), pp. 6.

²⁵ Slovak Ministry of Defence (note 24), pp. 10, 25.

²⁶ On the EU's arms embargo on Russia see chapter 14, section II, in this volume.

²⁷ E.g. North Atlantic Council (note 7), para. 31.

²⁸ SIPRI Arms Transfers Database (note 21).

²⁹ Balogh, O., 'The importance of the Zrínyi 2026 defence and military development program', *Vojenské rozhledy*, vol. 28, no. 3 (Sep. 2019), pp. 55–70; and MTI, 'Defence minister warns of new military threats', *Hungary Today*, 3 June 2019.

Hungary had already started to replace Russian-sourced equipment in the mid-2000s when it acquired Swedish combat aircraft. The next round of major procurement started in late 2018 and included the acquisition of 46 tanks and 24 self-propelled guns from Germany for \$565 million.³⁰

Conclusions

The decrease in military expenditure by NATO member states following the 2008 financial and economic crisis started to reverse in the mid-2010s. Threat perceptions became more pronounced, in particular from Russia after its annexation of Crimea, but also in relation to the rise of the Islamic State and the refugee and migrant crisis. These perceptions led NATO members to officially confirm their shared objective to spend 2 per cent of GDP on the military and a minimum of 20 per cent of military expenditure on equipment. At the same time, national economies and public finances recovered, which permitted increased spending.

Since the NATO summit in 2014, the number of NATO countries that allocate 20 per cent or more of their military expenditure to equipment has increased. Growth has been more significant among Central European members of NATO, driven by a combination of factors. Chief among these is perceptions of heightened threat from Russia. In addition, a large share of the equipment used by Central European NATO countries was outdated, and in many cases had been supplied by Russia in the 1990s or by the Soviet Union. Thus, as these states sought to modernize their weaponry, they also sought to decrease their dependence on Russia for maintenance of the existing major equipment.

Among other European members of NATO, however, increases in equipment spending as a share of military expenditure have been more moderate. Their responses to NATO's equipment spending guideline have varied significantly based on the extent to which they are affected by the identified threats and the technical conditions and size of their existing military arsenals.

While the European members of NATO have made progress towards meeting the NATO guideline of spending 20 per cent of military expenditure on equipment, there are still questions as to whether they are now more prepared to deal with the perceived threats. Spending more on equipment does not necessarily result in better military capability or preparedness. The focus on military spending guidelines risks simplifying the response to a multifaceted and unstable array of threats to security.

³⁰ SIPRI Arms Transfers Database (note 21).