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  Bhupinder S. Nijjar

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  Anil Chopra

• Arguing for a Norms-Based Framework for Nuclear Responsibilities
  Tanvi Kulkarni

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  Manan Dwivedi and Manisha Sarade

• China in Maldives: Implications for India
  Shantanu Roy-Chaudhury

• China’s “Marching West” Strategy: Creating a Eurasian Great Power
  Joshy M. Paul

• India-Sri Lanka Relations: Evaluating the Impact of Global Politics
  Sushmita Bharti

• China’s Environmental Security
  Ishka Yadav

• From Astrakhan to Vladivostok: Growing Relevance of Subregional Cooperation between India and Russia
  Chandra Rekha

Book Reviews
The Union Budget for the Financial Year 2021-2022 was presented by the Finance Minister Smt. Nirmala Sitharaman in Parliament on February 1, 2021. The total defence budget for 2021-2022 saw a marginal hike of around 1.4 per cent. But the good news was that the Capital budget for modernisation jumped by nearly 19 per cent. Interestingly, the figures released showed that an unbudgeted Rs. 20,776 crore was additionally spent to buy military hardware to immediately beef up military requirements in view of the skirmishes and face-off with China in Ladakh.

2021-2022 DEFENCE ALLOCATION

The total allocation for the Ministry of Defence (MoD) for 2021-2022 is Rs. 4.78 lakh crore (US$ 65.4 billion) compared to Rs. 4.71 lakh crore (US$ 64.5 billion) in the 2020-2021 budget. This allocation includes all expenditures of the MoD. It also covers the pay and pensions of Air Marshal Anil Chopra PVSM AVSM VM VSM (Retd) is Director General, Centre for Air Power Studies, New Delhi.

all military personnel and defence civilians, including DRDO and ordnance factories. The Defence budget comes to around 1.63 per cent of the GDP. The budget can be further broken down to Defence Services Revenue at Rs. 2,12,027.56 crore (US$ 29.05 billion); Defence Services Capital Outlay at Rs. 1,35,060.72 crore (US$ 18.5 billion); MoD Civilians Revenue at Rs. 10,083.93 crore (US$ 1.38 billion); MoD Civilians Capital at Rs. 5,173.41 crore (US$ 0.7 billion); and Defence Pensions at Rs. 1,15,850 crore (US$ 15.87 billion). The real defence expenditure, also referred to as defence estimates, includes only the Capital and Revenue expenditures of the Armed Forces, and this amount is Rs. 3,47,088.28 crore (US$ 47.55 billion). This amount is just 1.21 per cent of the GDP. Allocation under Non-Salary Revenue to meet operational requirements has been increased to Rs. 54,624.67 crore. This is 6 per cent growth over FY 2020-2021.

**DEFENCE CAPITAL BUDGET**

The allocation under Capital for FY 2021-2022 represents an increase of 18.75 per cent over FY 2020-2021 and 30.62 per cent over FY 2019-2020. This was the highest ever increase in capital outlay of Defence in the last 15 years. The Capital budget had gone up from the Revised Estimate for 2020-2021 of Rs. 1,34,510 crore as against last year’s budgetary allocation of Rs. 1,13,734 crore. Nearly Rs. 20,000 crore additional Capital had been released in the middle of the year for sudden procurement of ammunition and weapons from several countries after face-off with China. Capital expenditure includes purchasing new weapons, aircraft, warships and other military hardware. The capital outlay for 2021-2022 is thus an increase of 18.75 per cent compared to last year’s original allocation of Rs. 1,13,734 crore. The nearly 19 per cent hike in the capital expenditure is the “highest ever” increase in the last 15 years.

**CAPITAL OUTLAY**

(Rs. crore)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital BE</th>
<th>Increase</th>
<th>Percentage increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
<td>1,03,394.31</td>
<td>9,412.18</td>
<td>10.01</td>
</tr>
<tr>
<td>2020-2021</td>
<td>1,13,734.00</td>
<td>10,339.69</td>
<td>10.00</td>
</tr>
<tr>
<td>2021-2022</td>
<td>1,35,060.72</td>
<td>21,326.72</td>
<td>18.75</td>
</tr>
</tbody>
</table>
The Capital allocation for DRDO has been increased to Rs. 11,375.50 crore. This is an increase of 8 per cent over 2020-2021 and 8.5 per cent over 2019-2020. The allocation for Border Roads Organisation (BRO) has been increased to Rs. 6,004.08 crore which is 7.48 per cent increase over FY 2021-2022 and 14.49 per cent over FY 2019-2020.

The Army gets capital outlay of Rs. 36,481 crore as against Rs. 33,213 crore in 2020-2021, as per the revised estimates. Navy’s capital outlay is Rs. 33,253 crore against Rs. 37,542 crore in the previous budget. The Indian Air Force (IAF) traditionally gets the highest capital budget as the airborne platforms and sensors are more liable to early obsolescence. Air Force capital outlay is Rs. 53,214 crore. This is a drop of Rs. 1,840 crore compared to the money it spent under capital expenditure in the current fiscal. The budgetary capital outlay for the IAF for 2020-2021 was Rs. 43,281.91 crore but the revised estimate put the figure at Rs. 55,055 crore. One good decision has been that the “capital defence budget” will be non-lapsable as advised by the Finance Commission.

The capital allocation for the Defence Research and Development Organisation (DRDO) has been pegged at Rs. 11,375 crore which is an increase of 8 per cent over the amount earmarked in 2020-2021. The allocation for Border Roads Organisation (BRO) has been increased to Rs. 6,004 crore which is 7.48 per cent more than the amount given in 2021-2022.

REVENUE BUDGET
The total revenue expenditure, which includes expenses on operations, training, maintenance, and salaries of serving personnel, is pegged at Rs. 2.12 lakh crore. Even an extended deployment in Ladakh will not make much additional demand under this code-head, because operational expenditures and training are catered for.

PENSIONS BUDGET
Interestingly, the outlay for defence pensions at Rs. 1.15 lakh crore has come down from last year’s budgeted Rs. 1.33 lakh crore in the previous budget. The drop in the pension is reportedly because last year there was an additional outgo of pension arrears under OROP.
THREAT PERCEPTION, GLOBAL AMBITIONS AND DEFENCE BUDGETS

Military budgets usually reflect how a country perceives the threats against it, or the amount of aggression it wishes to conjure because of its global or regional ambitions. The USA and China have no immediate threats but have global ambitions. There are others like India, Israel, and Iran, who have serious threats because of regional disputes. India has serious boundary disputes with its two main neighbours, China and Pakistan, both of whom have large standing militaries and are nuclear powers. There are many other smaller countries who have local threats from dominant neighbours in different parts of the world. India is a large country, and will soon have the world’s highest population. It continues to have relatively low per capita income. Also, India has still to catch up with the rest of the world on many social indicators.

The defence budget is the amount of financial resources dedicated by a state to raising and maintaining armed forces or other means essential for defence purposes. The size of a budget also reflects the country’s ability to fund military activities. Factors include the size of that country’s economy, other financial demands, and the willingness of the government or people to fund such military activity. While military expenditure is often a boost to local economies, yet military expenditure is often considered a drag on development. Therefore, the annual budget of the country has competing demands from various sectors. Balancing social and economic development and security needs is thus a complex matrix. Comparing the defence budget by GDP ratios, other than China and Japan, all the other major countries spend more than India despite having less threat.

CHINA AND PAKISTAN DEFENCE SPENDING

China’s May 2020 defence budget was US$ 178.6 billion, according to data from the Center for Strategic and International Studies. China


also has a huge out-of-budget defence funding. Some analysts put this figure close to 35 per cent. Interestingly, for 2018, IISS estimated Chinese defence spending to be US$ 225 billion, while SIPRI put the number at nearly US$ 254 billion. The official budget that year was just US$ 167 billion. Pakistan’s defence budget (announced in June 2020) for 2020-2021 was Rs. 1,289 trillion⁵ (US$ 8.1 billion) which was almost 12 per cent higher than the year before.

HISTORIC EVENT BASED DEFENCE EXPENDITURE⁶
The defence budgets of different countries have fluctuated based on threat of the times, and have seen huge spikes. Typically, the United States’ defence budget during World War I was 22 per cent of Gross Domestic Product (GDP). Immediately after the war it came down to 1 per cent of GDP. During WWII it exceeded 41 per cent of GDP. Following WWII, to counter the expansion of Communism, Americans supported defence expenditure of 3.6 per cent GDP. The Cold War saw spikes, and at one stage it was as high as 10 per cent during the Vietnam War. In the 1970s it came down 5.5 per cent. After the September 11, 2001 terrorist attacks, defence spending spiked again, peaking at 5.7 per cent in 2010.

ABSOLUTE MILITARY EXPENDITURE
A pie chart showing global military expenditures by country for 2018, in US$ billions,⁷ and in terms of percentage, according to Stockholm International Peace Research Institute (SIPRI)⁸ (Figure 1 & 2):

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Figure 1

Top defence budgets, 2018 (US$bn), including total European NATO spending

- United States: 643.3
- China: 168.2
- Saudi Arabia: 82.9
- Russia*: 63.1
- India: 57.9
- United Kingdom: 56.1
- France: 53.4
- Japan: 47.3
- Germany: 45.7
- South Korea: 39.2
- Brazil: 28.0
- Australia: 26.6
- Italy: 24.9
- Israel*: 21.6
- Iraq: 19.6

Total NATO Europe: 264

Note: US dollar totals are calculated using average market exchange rates for 2018, derived using IMF data. The relative position of countries will vary not only as a result of actual adjustments in defence spending levels, but also due to exchange-rate fluctuations between domestic currencies and the US dollar. The use of average exchange rates reduces these fluctuations, but the effects of such movements can be significant in a number of cases.

*Under NATO defence-spending definition; *Includes US Foreign Military Assistance

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MAJOR DEFENCE SPENDERS AS PERCENTAGE OF GDP (2019)

The countries maintaining some of the world’s largest military budgets, China, India, France, Germany, Japan, Russia, Saudi Arabia, the United Kingdom and the United States are frequently recognised to be great powers. According to Statista, in 2019, the total world military expenditure amounted to US$ 1,917 billion. In 2019, the worldwide average military spend as percentage of GDP was 2.2 per cent. In 2019, Saudi Arabia spent 8 per cent of its GDP on defence, Israel 5.3 per cent, Russia 3.9 per cent, the United States spent 3.4 per cent, South Korea 2.7 per cent, India 2.4 per cent, France, Australia and China 1.9 per cent, the United Kingdom 1.7 per cent, Brazil 1.5 per cent, and Japan 0.9 per cent. Interestingly Oman spent 8.8 per cent, Kuwait 5.6 per cent, and Pakistan spent 4 per cent of GDP on defence.


The SIPRI fact sheet which includes a list of the world’s top 15 military spenders in 2019, based on current market exchange rates:

**Table 1: SIPRI Fact Sheet 2020 (For 2019)**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Spending (US$ bn)</th>
<th>Percentage of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>World Total</td>
<td>1,917</td>
<td>2.2</td>
</tr>
<tr>
<td>1</td>
<td>United States</td>
<td>732</td>
<td>3.4</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>261</td>
<td>1.9</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>71.1</td>
<td>2.4</td>
</tr>
<tr>
<td>4</td>
<td>Russian Federation</td>
<td>65.1</td>
<td>3.9</td>
</tr>
<tr>
<td>5</td>
<td>Saudi Arabia</td>
<td>61.9</td>
<td>8.0</td>
</tr>
<tr>
<td>6</td>
<td>France</td>
<td>50.1</td>
<td>1.9</td>
</tr>
<tr>
<td>7</td>
<td>Germany</td>
<td>49.3</td>
<td>1.3</td>
</tr>
<tr>
<td>8</td>
<td>United Kingdom</td>
<td>48.7</td>
<td>1.7</td>
</tr>
<tr>
<td>9</td>
<td>Japan</td>
<td>47.6</td>
<td>0.9</td>
</tr>
<tr>
<td>10</td>
<td>South Korea</td>
<td>43.9</td>
<td>2.7</td>
</tr>
<tr>
<td>11</td>
<td>Brazil</td>
<td>26.9</td>
<td>1.5</td>
</tr>
<tr>
<td>12</td>
<td>Italy</td>
<td>26.8</td>
<td>1.4</td>
</tr>
<tr>
<td>13</td>
<td>Australia</td>
<td>25.9</td>
<td>1.9</td>
</tr>
<tr>
<td>14</td>
<td>Canada</td>
<td>22.2</td>
<td>1.3</td>
</tr>
<tr>
<td>15</td>
<td>Israel</td>
<td>20.5</td>
<td>5.3</td>
</tr>
</tbody>
</table>

**USA SPENDS MORE THAN THE NEXT TEN COUNTRIES**

The Stockholm International Peace Research Institute (SIPRI) recently released an update to its military expenditure database, which shows that the United States spends considerably more on defence than any other country in the world. The database reported that, in 2019, the United States spent US$ 732 billion on national defence, which was more than the next 10 countries combined. (Figure 3)


DEFENCE EXPENDITURE AS SHARE OF GOVERNMENT SPENDING (2019)\(^\text{13}\)

One measure of defence expenditure is as share of government spending. As per 2019 World Bank report, at 31.8 per cent of its annual spending, Belarus defence expenditure was among the highest. Other big spenders were Singapore at 21.4 per cent, Saudi Arabia at 20.3, Oman 20.3, Armenia 19.8, Pakistan 18.4, Iran 13.3, Lebanon 13.8, and Myanmar 11.9. India was at 8.8 per cent, and China at 5.4 per cent.

MAJOR ARMS EXPORTERS AND IMPORTERS (2020)

International arms transfers seem to have levelled off in growth between 2011-2015 and 2016-2020, as per the SIPRI report.\(^\text{14}\) More
and more countries such as China, India and Turkey, which were once major arms importers have also been driving indigenous defence production. There were substantial increases in transfers by three of the top five arms exporters, the USA, France and Germany, and that was largely offset by declining Russian and Chinese arms exports. Middle Eastern arms imports grew by 25 per cent in the period, driven chiefly by Saudi Arabia (61 per cent), Egypt (136 per cent) and Qatar (361 per cent). The United States was the largest arms exporter, increasing its global share of arms exports from 32 to 37 per cent between 2011-2015 and 2016-2020. Almost half (47 per cent) of US arms transfers went to the Middle East. The USA further widened the gap with the second largest arms exporter, Russia. Exports by China, the world’s fifth largest arms exporter in 2016-2020, decreased by 7.8 per cent between 2011-2015 and 2016-2020. Arms imports by India decreased by 33 per cent between 2011-2015 and 2016-2020. Russia was the most affected supplier, although India’s imports of US arms also fell, by 46 per cent.

I have chosen a few major countries to compare indicators to help evolve a reasonable defence budget. The data is based on the IMF’s “World Economic Outlook Database October 2019”.

Table 2: Parameter Comparison to Evolve Reasonable Budget

<table>
<thead>
<tr>
<th>Parameter</th>
<th>USA</th>
<th>China</th>
<th>Russia</th>
<th>Japan</th>
<th>Pakistan</th>
<th>Israel</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Nominal</td>
<td>$ 21.44</td>
<td>$14.14</td>
<td>$1.64</td>
<td>$5.15</td>
<td>$284</td>
<td>$395.10</td>
<td>$2.94</td>
</tr>
<tr>
<td>GDP PPP</td>
<td>$ 21.44</td>
<td>$27.31</td>
<td>$4.21</td>
<td>$5.75</td>
<td>$1.2</td>
<td>$334.675</td>
<td>$10.51</td>
</tr>
<tr>
<td>GDP Per Capita PPP</td>
<td>$65,281</td>
<td>$16,785</td>
<td>$29,181</td>
<td>$43,236</td>
<td>$5,872</td>
<td>$39,121</td>
<td>$9,027</td>
</tr>
<tr>
<td>Public Debt by GDP</td>
<td>107%</td>
<td>50.5%</td>
<td>12.2%</td>
<td>237%</td>
<td>87%</td>
<td>59.9%</td>
<td>69.6%</td>
</tr>
<tr>
<td>Threat Index Scale of 10</td>
<td>3.5</td>
<td>5.6</td>
<td>8.3</td>
<td>1.6</td>
<td>8.5</td>
<td>6.3</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Defence Budget share of government expenditure

<table>
<thead>
<tr>
<th>Defence Budget</th>
<th>$ 732</th>
<th>$ 261</th>
<th>$ 65.1</th>
<th>$ 47.6</th>
<th>$ 11.4</th>
<th>$ 20.5</th>
<th>$ 71.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>of government expenditure</td>
<td>9.4%</td>
<td>7.9% ($ 3.4 trillion government expenditure in 2019)</td>
<td>11.4%</td>
<td>2.5%</td>
<td>18.5%</td>
<td>13.2%</td>
<td>15.5%</td>
</tr>
</tbody>
</table>

Defence Budget/GDP

<table>
<thead>
<tr>
<th>Defence Budget</th>
<th>3.4%</th>
<th>1.9%</th>
<th>3.9%</th>
<th>0.9%</th>
<th>4.0%</th>
<th>4.4%</th>
<th>2.4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IS THE FUNDING ADEQUATE FOR MODERNISATION?

Despite COVID-19, the increase in India’s defence budget this year was considered reasonable, and most military experts expressed satisfaction at the overall allocation. Undoubtedly, there is a need for further increases considering the increasing external threats, and boundary disputes with two nuclear neighbours. Indian Armed forces have long-delayed modernisation requirements. There are a large number of past committed liabilities like payments for Rafale, S-400, LCA variants, MH-60 Romeo helicopters, among others. The services look forward to long-delayed purchases like the 114 medium multirole fighters, Avro replacement by Airbus and Tata C-295 aircraft, medium multirole helicopters, combat drones, aircraft carrier, tanks and howitzers, submarines, among others.

Currently, the Indian Capital budget is 28 per cent of the total Defence budget. Modern armed forces spend close to 50 per cent. Even manpower-intensive China spends close to 35 per cent of the budget on Capital acquisitions. This skew must be changed gradually by better manpower planning. If indigenisation has to be pushed, it will require greater R&D spends. Surely the Capital budgets still need to go up further. Considering the modernisation background of the armed forces, an amount of Rs. 150,000 crore, implying an increase of approximately Rs. 15,000 crore, would be realistic for the current threat.

REASONABLE DEFENCE BUDGET FOR INDIA

India’s GDP in PPP terms is fairly high. That means that India can afford better quality of life for its people for fewer dollars. Albeit,
to buy arms from abroad, India needs hard cash, so absolute GDP matters. India’s efforts at arms import substitution is a process still evolving, and it may take at least two decades before India can start making most of the weapons and military platforms for its own needs. This is an area requiring a centralised push at the highest levels. For India to be able to allot greater resources in absolute terms to defence acquisitions, the economy has to keep growing at a faster rate. COVID-19 and some other factors have slowed economic growth and the target of a US$ 5 trillion economy by 2024 will require greater effort to reach, even if the government sticks to the targets.15 India’s per capita GDP even in PPP terms has a lot of catching up to do. However, India’s public debt remains relatively under control. One reason for this is the relatively low spend on social security.

India remains fairly high on threat Index. The close strategic and defence cooperation between China and Pakistan, both of which want to settle scores with India, actually increases the possibility of two-front war and the overall threat. This figure would go up for 2020 after the face-off in Ladakh and continuing hot-border on LoC. This would surely call for increased defence spending. India has the third largest defence budget and defence budget as a share of annual government expenditure too remains high. This puts constraints on how much the defence budget can be increased. Of the Rs. 4.78 lakh crore (US$ 65.4 billion) earmarked as Defence budget for 2021-2022, Rs. 3,47,088.28 crore (US$ 47.55 billion) has been provided under the Defence Services Estimates (DSE), which goes directly into the defence preparedness. Of this, Rs. 2,12,027.56 crore (US$ 29.05 billion, 44 per cent) goes for revenue expenditure for day-to-day running of the armed forces and includes cost of personnel and their salaries. It is important to note that the defence budget includes pensions at Rs. 1,15,850 crore (US$ 15.87 billion, 24 per cent) of veterans. Only around Rs. 1,35,060.72 crore (US$ 18.5 billion, 28 per cent) is for Capital purchases. These ratios need to change and at least 55 per

cent of defence allocation must be used for Capital acquisitions and modernisation. The exercise to change this skewed ratio may take nearly two decades, but efforts must begin now.

India’s GDP has been growing at around 6.5 per cent in the last decade. Defence budget growth rate has invariably been higher than or matching the GDP growth rate. In all fairness, the nation has been contributing a fair share of its GDP. However, the threat has increased, and the defence expenditure in the neighbourhood has been going up in absolute terms. Also, the new weapon systems are becoming disproportionately costly. To get value for money, India has to not only reduce defence exports, but should actually become a significant exporter of defence equipment so as to reduce costs for itself through economy of scale.

For the entire 1980s, China’s defence budget to GDP ratio was as high as 6 per cent. Only when their economy boomed, this ratio became below 2 per cent. It is a well-known fact that China spends a lot on defence which is outside the official defence budget. Some analysts put this figure at close to 35 per cent. For 2018, IISS estimated Chinese defence spending to be US$ 225 billion, while SIPRI put the number at nearly US$ 254 billion. The official budget that year was just US$ 167 billion. Comparing the defence budget by GDP ratios, other than China and Japan, all the other major countries analysed above spend more than India, despite having less threat. India clearly has a margin to increase the total defence budget to 3 per cent of GDP for another decade. This will allow India to catch up with defence modernisation and also promote indigenisation.