



# ISSUE BRIEF

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## Joint Ventures (JVs): Key to Make India a Defence Manufacturing Hub



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The defence industry in independent India has been dominated by Defence Public Sector Undertakings (Defence PSUs) and Ordnance Factories (OFs). These two, together, contribute about 90 per cent of the total domestic manufacturing output.<sup>1</sup> The Defence Sector was thrown open to the domestic private industry in May 2001, with up to 26 percent FDI, both subject to approval by the Government. However, the situation on ground did not show much improvement in more than a decade, from 2001 to 2014. Though India is ranked among the top 15 producers of defence hardware in the world,<sup>2</sup> the existing defence industrial base has not been able to meet the requirements of modern weapons, equipment and munitions of our Armed Forces. India still relies primarily on imports of major weapons, equipment and missiles. The domestic private firms that have entered the Defence Sector are generally struggling to establish themselves and make a mark. Today, India wears an un-envi-ous crown of being the largest importer of arms (by value), that stands at 12 percent of the total global arms imports, for the five-year period

### *Key Points*

1. India is ranked among the top 15 producers of defence hardware in the world, yet the existing defence industrial base has not been able to meet the requirements of modern weapons, equipment and munitions of our Armed Forces.
2. The outlook for the Aerospace and Defence Industry in India is positive and expected to reach \$70 billion by 2029. There are immense opportunities for forming JVs and collaborating on variety of technologies, ranging from small arms, tanks, artillery guns, air defence systems to radars, missiles, fighter aircrafts and ships, in the Defence Sector.
3. India approved 36 JV proposals for manufacture of defence equipment, with Indian Public / Private Companies till March 2016. Additional 14 JV proposals, for design, development and manufacturing of defence weapons & equipment, between foreign and Indian companies have been inked from Apr 2016 till Jul 2018 bringing the total number to 50 JV proposals.
4. The JVs will enable leveraging the benefits of vast infrastructure and resources of the Defence PSUs in defence manufacturing; and the marketing skills, flexibility of the Private Industry.
5. For all capital acquisitions under the 'Buy Global' category, the JVs, that can achieve minimum of 30 percent indigenous content for their products, will be exempt from offset obligations.
6. Better understanding and strong partnerships between Indian Govt and friendly foreign countries will help in creating conducive environment and encourage defence companies, both domestic and foreign, to form JVs.

The Centre for Land Warfare Studies (CLAWS), New Delhi, is an independent think-tank dealing with national security and conceptual aspects of land warfare, including conventional and sub-conventional conflict and terrorism. CLAWS conducts research that is futuristic in outlook and policy-oriented in approach.

## Joint Ventures (JVs) ...

from 2013 to 2017.<sup>3</sup> India currently imports nearly 50 percent of its ammunition requirements by value, with an annual spending of more than Rs. 10,000 crore on ammunition.<sup>4</sup> The country has a long way to go, before truly developing indigenous capability in defence.

Indian Defence Sector offers enormous opportunities that can hardly be ignored, both by domestic as well as foreign companies. Therefore, “Make-in-India,” the flagship initiative launched by the Govt. in 2014 with the aim to achieve self-reliance and indigenisation in the Defence Sector, acquires tremendous significance. The Government has set an ambitious target of sourcing 70 percent of India’s Armed Forces’ requirements from indigenous manufacturing by 2020, by opening up the largely state-run sector to private players and foreign firms.<sup>5</sup> Since May 2014, several initiatives were taken by the Govt., in consultation with the industry, both Private and Public, the Armed Forces and other stakeholders, to create a conducive environment for business and encourage Private Sector participation in defence. A large number of industrial licences were issued to Private Sector companies for design, development and manufacturing in defence; and in 2015 the exemption of excise duty to the Public Enterprises (Defence PSUs and Ordnance Factories) was withdrawn to provide a level playing field to the Private industry. The initial two years from 2014 to June 2016 saw issue of more than 200 industrial licences to domestic companies.<sup>6</sup> However, the great amount of interest evinced in the Defence Sector by domestic and foreign companies has so far been of little solace as the progress on the ground has been far from spectacular. Though some of the domestic companies have been in the field of defence manufacturing for more than a decade, yet access

to modern technology and foreign investment in defence has not resulted to the desired extent.

Joint Ventures (JVs) is the way forward, the “Key,” that can help expand our defence industrial base and catapult India into the league of major defence manufacturers in the world. Through JVs with established partners from friendly foreign countries, India can take rapid strides and become a global defence design, development and manufacturing hub. According to a joint report by IESA, Nasscom and Roland Berger,<sup>7</sup> the outlook for the Aerospace and Defence Industry in India is positive and expected to reach \$70 billion by 2029. There are immense opportunities for forming JVs and collaborating on a range of technologies, ranging from small arms, tanks, artillery guns, air defence systems to radars, missiles, fighter aircraft and ships, in the Defence Sector. Several major foreign defence companies are actively looking for partnerships with Indian companies and/or outsourcing of defence products’ manufacturing.

### Joint Ventures (JVs): The Status

As far as JVs in the Defence Sector are concerned, the progress has not been on the desired lines. India approved 36 JV proposals in Defence Sector for manufacture of defence equipment, both with Indian Public and Private Companies till March 2016. This information was given by Minister of State for Defence, Mr. Subhash Bhamre in the parliament on Friday, November 24, 2016.<sup>8</sup> Additionally 14 JV proposals,<sup>9</sup> for design, development and manufacturing of defence weapons/equipment, between foreign and Indian companies have been inked from April 2016 till July 2018 bringing the total number to 50 JV proposals. Some of the major JVs that have been formed are listed as under:

Sr. No.	Partners in JV	Area of Interest
1.	Hindustan Aeronautics Limited (HAL), United Aircraft Corporation-Transport Aircraft & Rosoboronexport Russia (JV named as Multi-role Transport Aircraft Ltd. (MTAL)) <sup>10</sup>	Multi-role transport aircraft. JV incorporated on December 1, 2010.
2.	Rolls-Royce, HAL (JV named as International Aerospace Manufacturing Pvt. Ltd. <sup>11</sup> (IAMPL))	Manufacture in excess of 130 different parts which will be used across the existing range of Rolls-Royce Civil Engines which includes the Trent Family (500, 700, 800, 900, 1000 and XWB), RB211 and V2500. Components for Trent family engines (only civil aerospace engines), go into the Dreamliner, Airbus A350 & A330, the wide-bodied range of aircraft; and V-2500 engines that are used for narrow-bodied aircraft, like Airbus A320. <sup>12</sup>
3.	Bharat Electronics Limited (BEL), Thales (JV, incorporated in August 2014, <sup>13</sup> is named as BEL-Thales Systems Limited)	Air surveillance, including Air Traffic Management radars, and select ground-based military radars. Joint development of the new fire control radar, a fire control radar for both gun and missile systems. <sup>14</sup>
4.	Wipro Infrastructure Engineering (WIN), Israel Aerospace Industries (IAI) (Strategic alliance announced in July 2017 <sup>15</sup> )	Composite aero-structure, parts and assemblies for global markets.
5.	Dassault Aviation, Reliance Group  (JV, formed in October 2017, is named as Dassault Reliance Aerospace Limited (DRAL))	Components of aircraft. Facility, named "Dhirubhai Ambani Aerospace Park," based in Nagpur. DRAL will manufacture several components of the offset obligation connected to the purchase of 36 Rafael Fighters from France, signed between the two Governments in September 2016. <sup>16</sup>
6.	Reliance Defence, Yugoimport of Serbia <sup>17</sup>	Ammunition catering to current and future requirements of Armed Forces. Undertake joint development of next generation ammunition. <sup>18</sup>
7.	Reliance Defence, Thales <sup>19</sup>	Develop capability to integrate and maintain radar and electronic warfare sensors. Manufacturing of microwave technologies and high performance airborne electronics.
8.	Tata (Tata Advanced Systems), Boeing Aerospace (JV is named as Tata Boeing Aerospace Ltd. (TBAL))	Fuselages for AH-64 Apache Helicopter. Facility inaugurated in Hyderabad on March 1, 2018. TBAL is Boeing's first equity JV in India. <sup>20</sup>
9.	Augusta Westland, Tata Sons (JV is named Indian Rotorcraft Ltd <sup>21</sup> (IRL))	Assembly of AW 119 helicopters. <sup>22</sup> Facility will be located in GMR Hyderabad Aviation SEZ.
10.	Lockheed Martin, Tata Advanced systems <sup>23</sup>	Aero structures, F-16 Block 70 fighter jets.
11.	Tata Advanced Systems, HBL Elta Avionics of Israel (JV named as HBL ELTA Avionics Systems Pvt. Ltd. <sup>24</sup> (HELA))	Radar, communications, electronic warfare, homeland and surveillance systems.
12.	Kalyani Strategic Systems Ltd., Rafael Advanced Defence Systems Ltd. of Israel (JV named as Kalyani, Rafael Advanced Systems <sup>25</sup> (KRAS))	SPIKE Anti-Tank Guided Missiles (ATGMs). KRAS is India's first private sector missile sub-systems manufacturing facility and was inaugurated in Hyderabad in August 2017.
13.	Rafael Advanced Defence Systems, Astra Microwave Products Limited (JV named as Astra Rafael Comsys Private Ltd. <sup>26</sup> (ARC))	Tactical radio communication systems, electronic warfare systems and signal intelligence systems. Facility located in Hyderabad.

14.	Mahindra Defence Systems Limited, Telephonics Corporation of the United States of America (JV named as Mahindra Telephonics <sup>27</sup> )	Communication systems, radar systems, maritime surveillance systems, search, rescue and weather avoidance systems. Facility located in Prithla, Palwal, Faridabad.
15.	Mahindra & Mahindra, BAE systems <sup>28</sup> (JV named as Defence Land Systems India (DLSI))	Land vehicles to include Axe high mobility vehicle as well as up-armoured and bulletproof Scorpios, Boleros, Rakshak, rapid intervention vehicles and the Marksman light armoured vehicle. Have produced a new mine protected vehicle named MPVI (Mine Protected Vehicle India). JV company will be involved in a number of future artillery programmes including the M777 lightweight howitzer and the FH77B 155mm howitzer.
16.	Wipro, CAE (Canadian Aviation Electronics) <sup>29</sup>	Simulation (simulation-based training, operations, maintenance and training support services), for areas like war gaming, C4ISR and a range of defence platforms.
17.	Diehl Remscheid (Germany), India Forge <sup>30</sup>	Combat vehicles, Diehl system tracks for infantry combat vehicles (ICVs) BMP1/2 as well as the Tanks T-72 and T-90.
18.	Axis Aerospace, Rosoboronexport <sup>31</sup>	Design, production and integration of avionics systems, including production of Russian avionics under licence in India for MiG-35, Sukhoi SU-30, MiG-29 fighter jets as well as Mi-17, Mi-28, Kamov 28 helicopters.

### Memorandum of Understanding (MoUs)

Serial No.	Partners	Area of Interest
1.	Northrop Grumman, Pipavav Shipyard <sup>32</sup>	To explore potential business relationships. MoU signed in 2011.
2.	Mahindra Aerospace Private Limited, Canada's Viking Air Ltd.	To form a strategic alliance to support and take advantage of India's growing regional air connectivity opportunities, <sup>33</sup> MoU signed on February 23, 2018, during visit of Canadian Prime Minister, Mr. Justin Trudeau, to India.

### Benefits

**Boost to MSMEs.** The JVs will provide a major boost to the MSMEs who will be sub-contractors to the JV. As a result, thousands of people are likely to get employment. Currently, the small and medium-sized enterprises (SMEs) supply around 20-25 percent of the sub-assemblies and components to public sector enterprises (PSUs) like HAL. But, with the formation of more number of JVs, the contribution of MSMEs in manufacturing of assemblies, sub-assemblies and components is likely to get tremendous amount of stimulus.

**Transfer of Technology (ToT).** Foreign companies are generally not eager to transfer their technology to Indian companies. However, if concerted efforts are made, significant level of ToT should be a logical outcome and ought to be included as a part of the deal.

**Expansion of Domestic Defence Industrial Base.** In capital acquisitions under the "Buy Global" category,

to fulfil offset obligations, the contracts are obviously going to be awarded to Indian companies by the OEM and its partners. This will lead to formation of JVs and promote expansion of the domestic defence industrial base.

**Leverage the Strengths of Defence PSUs and Private Industry.** The JVs will enable leveraging the benefits of vast infrastructure and resources of the Defence PSUs in defence manufacturing and the marketing skills and flexibility of the private industry. The JV can rely on the experience of Defence PSUs and the private industry for innovative solutions, futuristic planning and execution.

### Guidelines for Public Sector Undertakings (PSUs) to establish JVs

The Indian Government has also approved new guidelines in 2016, for the PSUs to establish JVs with private firms with a view to providing Defence PSUs

a level playing field for forging partnerships. The government viewed that the enhanced participation of private industry in defence and changes effected in the defence acquisition procedures, precluded the need for separate JV guidelines for Defence PSUs. Also, having multiple sets of guidelines could have caused confusion in the environment and was not warranted. The government, therefore, abolished the previously existing guidelines that had been notified in February 2012, for establishing JV Companies by Defence PSUs.<sup>34</sup> The change is likely to help Defence PSUs like Bharat Electronics Limited (BEL), Hindustan Aeronautics Limited (HAL), Bharat Earth Movers Limited (BEML), Bharat Dynamics Limited (BDL), Goa Shipyard Limited (GSL), Garden Reach Shipbuilders & Engineers (GRSE), etc., to establish JVs and enhance accountability, self-reliance and autonomy in ensuring that the process of JV formation is effectively managed by them. Amendment was issued and these guidelines will not be required now for entering into JV by the Defence PSUs.<sup>35</sup> Currently, the guidelines issued by the Department of Public Enterprises and the Finance Ministry that are applicable to all Central Public Sector Enterprises, will be applicable for the Defence PSUs too. The government has, thus, taken a step in the right direction.

#### **Level Playing Field for JVs in Buy Global Category**

For all capital acquisitions under the “Buy Global” category, the JVs that can achieve a minimum of 30 percent indigenous content for their products will be exempt from offset obligations<sup>36</sup> under the new rules recently approved by the Govt. The OEMs very often struggle to discharge the offset obligations as they find it quite inconvenient and cumbersome. Hence, it provides an incentive to the foreign companies to form JVs with Indian companies. This step puts the Indian companies as well as the JVs formed with foreign companies at the same level. As per the new policy, any shortfall in the indigenous content, i.e., less than 30 percent, in the JV product will be converted into offset obligation. This progressive measure will encourage formation of JVs in Defence Sector between foreign OEMs and the Indian companies.

#### **Recommendations**

**Foster Strong Partnerships.** Better understanding and strong partnerships between Indian government and friendly foreign countries will help in creating a conducive environment and encourage defence companies, both domestic and foreign, to form JVs. In fact, there is a need to form close ties and foster strong partnerships with all stakeholders with a long-term aim in sight.

**Focus on Futuristic and Operationally Critical Projects.** The government, in consultation with the Armed Forces, needs to focus on futuristic and operationally critical projects in line with the Technology Perspective and Capability Roadmap (TPCR). An “In-Principle” decision is recommended to be taken and declaration made that post 2030, only comprehensive “Make in India” weapons and equipment would be procured by the Armed Forces of the country.

**Develop Defence Industrial Ecosystem.** Building up a defence industrial ecosystem is vital for indigenisation in defence. The defence industrial base should not only fulfil the requirements of the Armed Forces but also generate exports, create jobs and spur innovation.

#### **Cease Over-Protection of the Public Sector.**

It is generally perceived in the environment that the defence ministry remains tilted in favour of the defence public sector enterprises. Though various measures have already been taken by the government to provide a level playing field to the Private Sector, yet negative perception acts as a roadblock in the enhanced participation of private industry in the Defence Sector. Additional proactive steps are recommended to be taken by the government to encourage private sector participation, cease over-protection of the defence public sector enterprises and ensure formation of positive perception in the environment. This would facilitate creation of more JVs while simultaneously encouraging and expediting work on the JVs already formed between companies and approved by the government.

**Make Strategic Partnership Policy Functional.** The government unveiled the strategic partnership policy

in May 2017. However, even after more than a year, a tangible outcome is still awaited. Much will depend upon how the policy is made functional in the near future. The strategic partnership policy, when fully functional, will certainly encourage established foreign companies to enter into JVs/strategic partnerships with domestic companies and help bring in modern defence technology to India.

### Conclusion

The positive outlook of the government and encouraging response of the Armed Forces have ensured that the policies are generally aligned to achieve the long-term goal of making the country a favourable design, development and manufacturing

hub of weapons and equipment. “Make in India in Defence” is a focus area of the government and facilitating formation of JVs with major foreign weapon manufacturing companies will assist the country to emerge as a preferred destination for co-design, co-development and co-production of modern military hardware. As the government implements the suggested recommendations, systematically and in right earnest, the defence industrial base of the country will expand rapidly. Creation of a self-sustaining domestic defence manufacturing ecosystem would be a natural outcome and we can fairly estimate that within the next two decades, India will, in all likelihood, achieve its stated goal of self-reliance and indigenisation in defence.

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