

## Challenges of Indian Aviation MRO Industry

Gp Capt RK Narang, VM\*

The MRO (Maintenance, Repair and Overhaul) of aircraft, components and aero-engines is globally regarded as a strategic business, which has remained underexploited in India. India can leverage burgeoning aviation MRO industry to retrieve 90,000 jobs, save USD 2 billion of foreign exchange and create the potential for USD 5 billion of exports by correcting anomalies in our tax structure, which is expected to witness an exponential growth in the times to come. In India, foreign MRO companies have benefitted from a favourable tax regime with a disadvantage to the local MRO industry. The MRO industry was literally 'handed over' to foreign MRO companies and as of now, 90 per cent of the MRO requirements of India are being imported. There has been no investment by foreign investors in this sector despite allowing 100 per cent Foreign Direct Investment (FDI). Indian operators continue to obtain MRO services from foreign MRO services providers because of associated cost advantage for Indian carriers/operators to import MRO.

India is in the midst of an aviation boom due to rapid expansion of civil aviation industry. Its growth rates are expected to be around 20 per cent per annum. Airbus and Boeing data indicate that the commercial aircraft fleet comprising 550 aircraft in 2017-18 increased to 700 aircraft by 2018-19<sup>1</sup> and is expected to grow to 1000 aircraft by 2023. India's MRO import bill was USD 2.0 billion in 2019, which is expected to rise to USD 3 billion by

2023 unless the potential of this industry is realised and corrective actions are taken.

Indian commercial aviation industry needs about 1,000 new aircraft in the next 10 years and 2,000 new aircraft in the next 20 years. The 2018 long-term forecast of Boeing indicates that India would need another 2,300 jet aircraft valued at USD 320 billion in the next 20 years. The forecast predicts that India would need about 10 regional jets (below 90 seats), 1,940 single-aisle aircraft (90>200 seats) and 350 wide-body aircraft (>=200 seats) aircraft by 2037.<sup>2</sup> India would continue to be a major driver for the region's commercial aviation industry with more than five per cent of the world's commercial fleet. The long-term forecast of Airbus predicted that India would need 1,750 commercial aircraft from 2017 to 36. These would include 1,320 single-aisle aircraft and 430 wide-body aircraft that are valued at USD 255 billion.<sup>3</sup>

India has lost 90,000 direct jobs to countries like Sri Lanka, Singapore, Thailand, France and Germany, which can be brought back to India by correcting the fiscal tax imbalance. Indian engineering is amongst the best in the world and its industry possesses the requisite expertise to undertake MRO in India. India can become the MRO hub of South Asia, given its scale and technical capabilities if the Indian government provides a level playing field to the domestic MRO industry. India can convert this USD 2.0 billion<sup>4</sup> of net import of MRO in 2019 into a USD 5 billion export potential in the next 5-10 years. The long-

\*Group Captain Rajiv Kumar Narang, VM, is a serving officer of the IAF. He has published a book titled "India's Quest for UAVs and Challenges" and research papers including Indian Military History, Make in India in Civil and Military aviation, UAS Swarms, drone regulations, development of UAVs and counter-UAV technologies by India, China and Pakistan

---

term forecast of commercial aircraft manufacturers indicates that this sector is likely to witness a boom and create enormous 'high value' job opportunities in India. To achieve this, India must formulate a tax and regulatory mechanism that not only provides equal opportunities to Indian MROs but rather rewards them for creation of 'high value' jobs and revenue generation within the country. The review of tax structure can prevent the drain of precious foreign exchange and capability to foreign locations.

### **Policy Gaps and Lack of Ownership: Struggles of Indian MRO Industry**

#### **GST Anomaly**

The Planning Commission Working Group on Civil Aviation, in its report in June 2012, highlighted the issue of discriminatory tax policy resulting in Indian MRO players suffering from higher tax burden of nearly 40 per cent over foreign MRO and need for providing impetus to Indian MRO service providers.<sup>5</sup> The introduction of the Goods and Services Tax (GST) by the Indian government did not fully correct the discriminatory domestic taxation policies of India. The effective GST being levied on the MRO being done abroad is 5 per cent (IGST on Import). The airline can take a set off against the IGST, thereby placing Indian MRO services providers in a disadvantageous position. On the other hand, when the identical service is performed by Indian MRO, GST is levied at 18 per cent. The tax disparity has contributed to moving out of 90 per cent of the Indian MRO work to foreign destinations and companies.

Another challenge for the domestic MRO industry is unfavourable domestic tax structure vis-

a-vis tax structures in other countries. The GST on aviation MRO is levied at 18 per cent compared to 7 per cent charged by Singapore and Malaysia, while there is no tax on the MRO industry in Sri Lanka. Also, Indian MRO services providers do not undertake high-value services like MRO of aero-engines, heavy maintenance (C&D checks), modifications and components as they are unable to compete with foreign vendors due to adverse tax structure. The tax structure has also impeded the development and growth of the MRO industry. The GST on import of tools and test-benches is 18 per cent against a GST of 5 per cent on aircraft components, which further discourages setting up of testing and MRO facilities in India.

The publishing of civil aviation 'Vision-2040' prepared by the Federation of Indian Chambers of Commerce and Industry (FICCI) for the Ministry of Civil Aviation (MoCA) in January 2019 recognised the massive outflow of foreign exchange from Indian carriers and need for massive policy support. The vision document quoted several initiatives taken by the government to facilitate the growth of domestic MRO industry; however, it also highlighted that the most important pillar for the growth of the domestic industry, i.e. GST tax anomalies was yet to be corrected.<sup>6</sup> Indian MRO industry is working in the extremely unfavourable environment within the country and it could face closure given adverse taxation policy and other challenges. The GST anomaly needs to be corrected to provide domestic MRO industry with an equal opportunity, which is essential for its survival.<sup>7</sup>

#### **Airport Royalty**

The National Civil Aviation Policy (NCAP)-2016 gave exemption to MRO services providers

from charging ‘Airport royalty and additional charges’ for five years.<sup>8</sup> However, the lack of implantation of this provision almost three years after the announcement of the policy is a perfect example of gaps in the execution mechanism of India. The AAI continues to charge airport royalty under the Gross Turn Over (GTO) tax (under different headings like ground handling/ revenue sharing/ demurrage, etc.) that varies between 11 per cent and 20 per cent for using facilities at an airport, which adversely impacts their competitiveness. The charging of airport royalty by the Airport Authority of India (AAI), one of the departments of the Ministry of Civil Aviation despite the announcement of NCAP-2016 is indefensible. The unveiling of the NCAP-2016 and its non-

implementation could also create a credibility gap about India’s commitment to ‘Make in India’ initiative.

#### **CAR 66: Restrictive Regulation for Maintenance Technicians**

The aviation regulatory agencies decide the qualifications and certification criteria for employing technicians in the aviation MRO industry. India’s regulations for aviation maintenance technicians are formulated by the Director-General of Civil Aviation (DGCA) while Federal Aviation Authority (FAA) and European Union Aviation Safety Agency (EASA) formulate these regulations in the US and Europe respectively. The criteria for aviation maintenance technicians as laid down by the above aviation regulatory agencies are given below.

<b>Regulations for Aviation Maintenance Engineer</b>		
<b>Regulation Reference</b>	<b>DGCA</b>	CAR-66 Subpart C-Components
	<b>FAA</b>	A-FAR 145
	<b>EASA</b>	EASA: Foreign Part-145 Approvals
<b>Sub Section of Regulation</b>	<b>DGCA</b>	66.A205 Requirements
	<b>FAA</b>	145.157 Personnel Authorised to approve an article for Return to Service
	<b>EASA</b>	1.3 Component Certifying Staff Qualification Criteria
<b>Educational/ Basic Training Level</b>	<b>DGCA</b>	21 years old, 10+2 with physics, chemistry, maths and
	<b>FAA</b>	Trained in or has 18 months practical experience with the methods, techniques, practices, aids, equipment and tools used to perform the maintenance, preventive maintenance or alternations
	<b>EASA</b>	School-level or Apprenticeship certification
<b>Aeronautical Training Requirements</b>	<b>DGCA</b>	10+2 with physics, chemistry, maths and has CAR 66 License or 3 Yrs AME Course/ B Tech and passed CAR 66 Module
	<b>FAA</b>	Authorised to approve an article by the certified repair station
	<b>EASA</b>	Aeronautical School Diploma or Certificate or technical school diploma or certificate or aeronautical military school diploma

Table: Aircraft Component Maintenance Mechanic Certification by DGCA<sup>1</sup>, FAA<sup>2</sup> & EASA<sup>3</sup>

Aircraft Maintenance Licence	Maintenance License by DGC A	Certification by Maintenance Agency	Certification by Maintenance Agency
Examination by Aviation Regulatory Agency	Yes	No	No

The key differences among the regulatory provisions for aircraft technicians of the three aviation regulatory organisations can be summed up as follows:

### Regulations for Aviation Maintenance Engineer

The factory workers employed by Indian MRO industry have to pass a test conducted by DGCA to be eligible for undertaking MRO services in aviation MRO centres in India. While aviation factory workers in Europe and the US do not have to pass a similar examination. The limited number of DGCA license holder makes it difficult to find an adequate number of qualified technicians. Also, employing highly qualified personnel in place of highly skilled worker for relatively low-end jobs adversely impacts the economic viability of the MRO operators. Also, DGCA, continuing with the age-old practice of maintaining a hold over the aviation industry through examinations and licences indicates its intrusive approach and lack of faith in the industry. This has added to the challenges for the Indian MRO industry, which erodes their economic viability and competitiveness.

These regulations provisions have acted contrary to Indian leadership's approach of minimum governance to stimulate Indian industry. The draft CAR-66 released by DGCA in 2016 also did not include enabling provisions for MRO technicians.<sup>12</sup> While it is important to ensure that quality does not suffer, however, intrusive policies

and regulatory provisions often become restrictive and need to be reviewed by laying down standards on the lines of global aviation regulatory standards.

### Way Ahead Proposed Tax Structure

Most foreign OEMs and principle MRO Services providers are not registered in India. They undertake MRO activities by sending engine and other components to foreign MRO services providers for overhaul (which is not taxed) and by importing replacement engines, components and spares, which are charged @ 5 per cent under Chapter No. 88. Foreign MROs do not have to discharge GST. The local MRO company registered in India is required to pay GST for both spares as well as for the labour (out of which about 55 per cent is labour) @ 18 per cent which places local MROs at a disadvantage. When foreign OEMs give sub-contract to Indian MRO service providers for their Indian customers, Indian MROs charge GST @ 18 per cent. Foreign OEMs are not able to avail the benefit of the input tax credit in the absence of registration under GST. Hence GST @ 18 per cent becomes an additional burden to foreign companies. Indian MROs, therefore, become uncompetitive and lose out to other foreign MRO

services providers, who charge much lesser taxes.

India can exploit the tremendous potential of the MRO industry by creating a fiscal environment that gives Indian MRO industry an advantage over its foreign competitors for a limited period of five years so that they can create the necessary infrastructure. Alternatively, the domestic aviation MRO industry should at least be provided with a level playing field so that it can compete with foreign competitors and bring greater MRO business and associated jobs to India. The following is recommended:

**(a) Option-I.** The GST on MRO performed in India is reduced to 5 per cent as is being done for import of MROs suppliers by the Central Board of Indirect Taxes (CBIT).

**(b) Option-II.** The GST on aviation MRO imports is charged at 18 per cent.

### ***Predicted Revenue from Direct Taxes***

Either of the above measures would provide a

level playing field to Indian Industry and correct the anomalies of the current taxation policy that gives undue advantage to foreign MRO services providers and incentivises MRO imports. The changes in tax structure as proposed above are likely to result in better revenue collection as Indian MRO's ramp up their capability. The revenue generated from the direct taxes recovered from the employment of the staff and business transactions of the local industry will soon surpass the existing revenue of the government.

The total size of the foreign MRO Services industry (as estimated by the Ministry of Civil Aviation) was Rupees 9800 crores while the size of the Indian MRO industry was Rs. 700 crore during the year 2017-18. The following table provides a comparative analysis of envisaged changes in revenue collection as per the present tax structure vis-a-vis two envisaged scenarios as proposed above:

Rs. Crore

<b>Total Size of MRO Market in India 2017-2018</b>			
<b>Import</b>		9,800	
<b>Local</b>		700	
<b>Tax Structure &amp; Tax Collection</b>			
	<b>Present Tax Collection</b>	<b>Proposed Tax Structure &amp; Collection</b>	
		<b>Option 1</b>	<b>Option 2</b>
		GST @ 5% on Indian and Foreign MROs	GST @ 18% on Indian and Foreign MROs
<b>GST on Foreign MRO</b>	490*	490	1,764
<b>GST on Local MRO</b>	126**	35	126
<b>Total</b>	618	529	1,890
<b>Difference over Present</b>	NA	(89) (Reduced tax in due course is expected to increase revenue collection)***	1,272

---

**Note.** MRO involves the replacement of spares and carrying out maintenance, repair and overhaul activities concerning the engine, replacement of components and airframe (C&D checks etc).

### **Predicted Revenue from Indirect Taxes**

The revenue generated from MRO industry with revised tax structure could touch USD 10 Billion in 10 years if the impact of indirect employment, collection of income tax from employees in India and other benefits accruing from exports is taken into account, e.g. if 9,800 crores foreign MRO is shifted to India, the loss of revenue under Option 1 will be offset 10 times the reduction of revenue as shown below:

Globally 55 per cent of MRO revenue is generated from labour charges. The increase in tax revenue from the income tax collected from the salary of the employees at an average income tax rate of 15 per cent (Rs. 9800\*55% \*15% = Rs. 809 crores) would amount to Rs 809 crore. This would be ten times the direct tax collection loss of Rs 89 crore as shown in the **Option-I** of the above table. The tax revenues from indirect employment and ancillary industries will be additional.

### **NCAP Implementation**

The exemption from paying the airport royalty by MRO services providers should be promulgated in the Gazette as well as implemented on the ground at the earliest.

### **Review of CAR 66**

The provisions of CAR 66 dealing with Licensing of Aircraft Maintenance technicians

need to be reviewed to provide Indian industry with an equal playing field by aligning the DGCA CAR with that of the EASA and FAA.

### **Challenges for Indian MRO Industry**

The remarks of Oliver Andries, French CEO of Safran Aircraft Engine to the visiting Indian Defence Minister Rajnath Singh in October 2019 that “India is set to become the third-largest commercial market for aviation and we are keen to create a strong maintenance and repair base in India to serve customers, but we need to make sure that the Indian tax and customs systems are not terrorising us”, got widespread attention in India. Foreign OEMs often get an audience with Indian leaders and can influence the policy decisions in their favour due to the large value of their contracts and diplomatic leverage used by their leadership. The audience with the top leadership of India and the follow-up by their governments provide them with a big advantage vis-a-vis Indian manufacturers and MRO services providers. Indian MRO companies being small entities, often do not enjoy leverage to influence such policy decisions to correct tax anomalies. Indian industry leaders have to wait for years for corrections of such anomalies despite getting an audience with political leaders and decision-makers, which follows a slow process of decision making involving bureaucratic delays, cumbersome consultation process and time-consuming procedures, which become major hurdles in policy corrections. These simple and logical measures facing delays and indecision are inexplicable but sad realities of decision making in India.

---

## **Lack of Ownership**

The anomalies in Integrated Goods and Services Tax (IGST) on import of MRO parts and Goods and Services Tax (GST) on domestic MRO industry do not require an expert or an economist to figure out. On the other hand, MoCA and finance Ministry despite having been involved in the introduction of several policy reforms, failed to take note of the critical tax anomalies and policy gaps, which is unacceptable as well as indefensible. Also, publishing of the National Civil Aviation Policy (NCAP) by Ministry of Civil Aviation in 2016 and non-implementation by one of its departments, i.e. AAI indicates lack of communication and lack of ownership of policies within the same Ministry.

These anomalies are causing irreparable harm to the domestic MRO industry and need to be corrected.<sup>13</sup> The nascent Indian MRO industry is at the critical juncture, where they are facing stiff competition from overseas MRO services providers with the opening up of the Indian civil aviation sector. The inaction or delays in corrections by the India government could mean the death knell for some of them. This would hurt the 'Make in India,' programme, which is one of the first and most important initiatives of Prime Minister Narendra Modi.

## **Conclusion**

Indian MRO industry has not taken off despite the launch of Make in India and UDAN initiatives in the absence of policy corrections as well as lack of will to implement them. The tax for import of 5 per cent on import of MRO services and 18 per cent GST on MRO services provided by local

MRO services providers is surprising as it just does not gel with the pronouncement of the country that is aspiring to develop the domestic industry. It is against the basic principle of Make in India initiative and yet this issues has been lingering on for a long time. The basic premise and assertion of the Indian Prime Minister to take the country towards minimum governance, itself gets diluted if DGCA policies continue to be overcautious. DGCA retaining more powers than is required indicates its lack of confidence in the Indian industry. Its CAR on certification of aviation maintenance technicians for MRO industry needs to be revisited and reviewed to be brought at par with the practices followed by FAA and EASA.

MRO facilities in India, with the proposed policy corrections and resolution of tax anomalies, has the potential to enable airlines operating in India to achieve faster turnaround times, savings in operating costs and reduce foreign exchange outflows. The correction in adverse tax structure is essential to fill the technological vacuum and reduce dependence on foreign vendors. This will make Indian MRO services competitive to get business in India as well as from neighbouring countries, which will result in an increase in jobs, growth of MSME sector and provide a boost to the economy. Indian Government has made the 'Make in India' initiative as one of its key objectives along with identification of Aerospace and Defense as a key sector under this initiative. The development of a robust domestic MRO industry must be made a priority area through necessary policy corrections.

---

## References:

---

- 1 *Why India's Aviation Revolution Brings Good Times for Travelers, Never to the Carriers*, April 28, 2019, NEWS 18, <https://www.news18.com/news/business/why-indias-aviation-revolution-brings-good-times-to-travellers-never-to-the-carriers-2119889.html>, accessed on September 30, 2019.
- 2 *Boeing Forecasts Demand for 2300 New Airplane in India*, BOEING, December 19, 2018, <https://boeing.mediaroom.com/2018-12-19-Boeing-Forecasts-Demand-for-2-300-New-Airplanes-in-India>, accessed on September 30, 2019.
- 3 *Indian demand for new aircraft forecasted at 1750 over 20 years*, AIRBUS, March 2018, <https://www.airbus.com/newsroom/press-releases/en/2018/03/india-demand-for-new-aircraft-forecast-at-1-750-over-20-years.html>, accessed on September 30, 2019.
- 4 *Global Fleet & MRO Market Forecast Commentary 2019-2029*, Oliver Wyman's Aviation Competitive & Market Intelligence Team, January 14, 2019, [http://cavok.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/January/2019-2029\\_Oliver\\_Wyman\\_Fleet\\_&\\_MRO\\_Forecast\\_Commentary\\_webVF.pdf](http://cavok.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/January/2019-2029_Oliver_Wyman_Fleet_&_MRO_Forecast_Commentary_webVF.pdf), accessed on September 30, 2019.
- 5 *Report of Working Group on Civil Aviation Sector, National Transport Development Policy Committee*, Ministry of Civil Aviation, Government of India, June 2012, [http://planningcommission.gov.in/sectors/NTDPC/Working%20Group%20Reports/Civil%20AviationReport%20of%20Working%20Group%20on%20Civil%20Aviation\\_Submitted%20to%20the%20Govt%20on%20July%204th,%202012.pdf](http://planningcommission.gov.in/sectors/NTDPC/Working%20Group%20Reports/Civil%20AviationReport%20of%20Working%20Group%20on%20Civil%20Aviation_Submitted%20to%20the%20Govt%20on%20July%204th,%202012.pdf), accessed on September 30, 2019.
- 6 *Vision 2040 for the Civil Aviation Industry in India*, Global Aviation Summit 2019, FICCI, January 15-16, 2019, <https://www.globalaviationsummit.in/documents/VISION-2040-FOR-THE-CIVIL-AVIATION-INDUSTRY-IN-INDIA.pdf>, accessed on September 30, 2019.
- 7 *Indian MRO Industry on the Verge of Expanding*, MRO-Network.com, October 25, 2018, <https://www.mro-network.com/maintenance-repair-overhaul/indian-mro-industry-verge-expanding>, accessed on September 30, 2019.
- 8 *Para 18 (B) (f), page-26 National Civil Aviation Policy-2016*, June 15, 2016, Ministry of Civil Aviation, India. [http://www.civilaviation.gov.in/sites/default/files/Final\\_NCAP\\_2016\\_15-06-2016-2\\_1.pdf](http://www.civilaviation.gov.in/sites/default/files/Final_NCAP_2016_15-06-2016-2_1.pdf), accessed on December 10, 2019.
- 9 *66.A205 Requirements, page 20, CAR-66 Issue-II R4 dated February 05, 2011*, Licensing of Aircraft Maintenance Engineers, Director General of Civil Aviation, India, [http://dgca.nic.in/fippub/CAR\\_66.pdf](http://dgca.nic.in/fippub/CAR_66.pdf), accessed on December 10, 2019.
- 10 *145.157 Personnel authorized to approve an article for return to service. Part-145, Repair Stations, 2011*, Federal Aviation Administration, <https://www.govinfo.gov/content/pkg/CFR-2011-title14-vol3/pdf/CFR-2011-title14-vol3-part145.pdf>, accessed on December 10, 2019.
- 11 *Foreign Part-145 approvals – Components, engines and APU certifying staff*, UG.CAO.00126.003, October 22, 2015, European Aviation Safety Agency, <https://www.easa.europa.eu/download/foreign-part-145-approval/Annex%20B/B8.%20UG.CAO.00126%20Components%20engines%20and%20APU%20certifying%20staff.pdf>, accessed on December 10, 2019.
- 12 *CAR-66, Issue-II, R-4, Licensing of Maintenance Engineers, November 2016*, Director General of Civil Aviation, India, [http://dgca.nic.in/misc/draft%20cars/CAR%2066%20\(Draft\\_Nov2016\).pdf](http://dgca.nic.in/misc/draft%20cars/CAR%2066%20(Draft_Nov2016).pdf), accessed on December 10, 2019.
- 13 *Rafale engine manufacturer tells Rajnath: Don't terrorise us on tax*, Indian Express, October 09, 2019, <https://in.finance.yahoo.com/news/rafale-engine-manufacturer-tells-rajnath-115121097.html>, accessed on October 10, 2019.





