

МЕЖДУНАРОДНЫЕ ОТНОШЕНИЯ, ПОЛИТИКА И ЭКОНОМИКА СТРАН АЗИИ И АФРИКИ

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Major Factors that Impede Reforms in India's Military-Industrial Complex in 2014–2023

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This article intends to assess the negative impact of a number of factors on the reforming process of the Indian military-industrial complex (MIC) under the Bharatiya Janata Party (BJP) government during 2014–2023. The authors distinguish three groups of factors that mostly affect the whole structure of India's defence industry at present. Conceptual and institutional factors include the contradictions of the basic laws and regulations of the Indian MIC, absence of the common strategy of the Indian armed forces development, politicising of the protectionist measures, offset policy implementation, bureaucracy's impact and inter-agency contradictions. Economic factors include the problems with FDI attraction, governmental efforts to change the structure of defence expenditures by reducing the pensions to military personnel and attracting the private sector. The group of technological factors focuses on the problems with the quality and delivery delays of the defence production in India. An applied policy analysis, a retrospective analysis of data and content of the main documents allow the authors to conclude that the considered set of factors bears systemic nature and exerts a substantial negative impact on the Indian defence industry. These factors hinder the implementation of ambitious goals of the BJP government, aimed at achieving the "strategic autonomy" in the crucial fields for its national security. Moreover, the current problems of the Indian MIC are exacerbated by the impact of the domestic political situation. Consequently, resolving these problems in the short and medium term seems unlikely. However, in the long-term the reforms being carried out by the Indian government would largely offset the negative effect of the considered factors.

Keywords: India, military-industrial complex, reforms, defence planning, defence expenditure

Introduction

An increasing importance of India in the international system has been amplified by India's ambitions to become a global power. Bharatiya Janata Party's (BJP) political and economic reforms have been creating a base for India's development and attracting more attention to specific features of India's domestic and foreign policies since 2014. Ruling BJP's economic strategy puts an emphasis on a rapid growth of its domestic production and hi-tech developments for a better integration into the global value chains. Another important part of this strategy is the focus of Narendra Modi's government on reducing India's dependence in strategically important fields. Regional geopolitical turbulence, traditional antagonism with Pakistan and the growing contradictions with China determine the need that ensuring India's national security through the nation's defence capabilities remain one of the crucial issues for the Indian political leadership. Therefore, specific features of India's military-industrial complex (MIC) attract special attention, when surveying the current political and economic development of this South Asian nation.

The military-industrial sector becomes a primary area for a set of reforms which are aimed not only at strengthening India's defence capabilities, but also at implementing the entire course of economic and political reforms of Prime Minister Modi. India's ambitious plans to join the top five countries in defence production by 2025 [1, p. 4] were demonstrated in a proactive governmental support of the Indian weapons and military equipment exports. However, the authors of this article believe that the Indian defence industry is facing a number of serious challenges that impede the implementation of ambitious targets of India's political and military leadership. In this regard, it would be reasonable to analyse the most important features and emerging difficulties within the process of reforming the Indian MIC, and pay special attention to the factors that constrain its development at the current stage.

The purpose of this article is to identify the most significant factors and circumstances that were negatively affecting the development of the Indian military-industrial complex under the BJP administration during 2014–2023. Rather strong links and interconnections between India's political, economic, administrative, military-industrial and socio-political factors have determined the need to combine them into three major groups: conceptual-institutional, economic and technological. To achieve the goal of our study, we have chosen the following methods: 1) the applied political analysis in its instrumental and empirical approaches, 2) the retrospective data analysis of the economic indicators pertaining to the production of weapons and military equipment, volumes of procurement and produced military goods, 3) the content analysis of key documents, regulating the development of the military-industrial complex in India, and statements by official representatives of the Indian Government and the Ministry of Defence.

Our hypothesis is that the combination of the aforementioned factors exerts a negative impact on the structure of military production and planning and continues to impede the development of the Indian defence industry despite the recent reforming process. It also seems that the problems of the Indian MIC are aggravated by the influence of the political conjuncture. This raises a question of how effective the reforms have been and how the process could evolve in the future. Therefore, it might be useful to start with an overview of the major reforms in the Indian MIC since 2014 and then to have a closer look at the factors that impede its development at the present stage.

Overview of MIC Reforms in 2014–2023

Soon after the BJP had won the parliamentary elections in 2014, it launched the “Make in India” Program to encourage Indian companies in various sectors of economy to develop their own research and development (R&D) and manufacture of a wide range of products. It was expected that by 2025 a quarter of the annual GDP would be contributed by enterprises, supported by this program. One of the main long-term goals of “Make in India” was to achieve autonomy in the Indian MIC as a strategically important sector for the Indian economy and national security. One characteristic of the Indian defence industry was the privileged position of state-controlled organizations due to the specifics of production and a weak competition from the private sector. The Indian defence industry had been traditionally dominated by a narrow group of the Defence Public Sector Undertakings (DPSU), four of which were the leading national manufacturers in the aerospace industry, ground systems, electronics, and shipbuilding. An important part of the MIC were also Ordnance factories within the structure of the Indian Ministry of Defence (MoD).

Although private manufacturers were admitted to the MIC as early as 2001, they could not compete with public sector defence enterprises on equal terms. In fact, the Indian MIC stagnated due to the lack of competition and serious motivation for development, remaining strategically dependent on import of weapons and military technologies [2]. The Indian military and political leadership perceived it as the undermining factor for the national defence capabilities. The Indian system of defence production before 2014 had other noticeable drawbacks as well. In addition to its heavy dependence on foreign military technologies, components and resources needed for production, among the most serious limitations were a poor efficiency and high production costs of state-controlled enterprises. The excessive orientation of DPSUs on the government defence procurement hindered the development of innovations and even affected the quality control of products, manufactured for the domestic market [3]. Therefore, “Make in India” Program was originally aimed at stimulating the production of weapons, military and special purpose equipment (WMSE) by state-controlled and private enterprises.

The “Make in India” Program attempted to encourage targeted government and foreign investments, obtaining foreign technologies, liberalizing licensing, and broad involvement of private businesses in areas previously accessible only to governmental contractors. Foreign direct investment (FDI) in India’s military-industrial sector has been allowed since 2001, but limited to 26 % of the total financing of any project. In 2014, it was decided to raise this level to 49 % automatically without requiring a governmental approval [4]. A noticeable facilitation of licensing procedures for WMSE manufacturers was supposed to attract Indian private micro, small and medium enterprises (MSME) to the military-industrial sector. It was presumed that this step would help to expand the production base and strengthen healthy competition between Indian defence sector enterprises. As a result, more than half of all types of military products (mostly components of equipment and ammunition) were allowed to be produced without obtaining Industrial licenses [5, p. 17].

On the other hand, as the Indian Army Lieutenant General (Retd) V. K. Saxena points out, the innovations of 2014–2017 were more an appealing slogan for the policy, pursued by the BJP government. In particular, the basic document, which regulated the sales of

Indian WMSE, continued to play a controversial role in the defence procurement even after its revision in 2016. The “Defence Procurement Procedure” (DPP) was actually perceived by manufacturers and purchasers as an “insurmountable obstacle” in the tendering and procurement process. Against that background, the leading public sector defence enterprises as well as the key members of the Defence Research & Development Organisation (DRDO) continued to suffer from cost overruns and delays of such critical projects as development of the Indian battle tank, light jet-fighter, missile systems, etc. [6, pp. 2, 7–9]. At the same time, most of MSMEs were not able to receive sufficient financial support from the Indian government, while their technologic level failed to meet minimal requirements for military production. In other words, the conceptual and legal basis for the military-industrial complex development was overcomplicated and did not meet the mandatory conditions, while the innovation process was facing numerous challenges.

An important role in implementing the “Make in India” objectives was played by two categories of projects for Indian manufacturers. The first category (Make-I) included projects with governmental funding of up to 90%. It implied a direct involvement of Indian suppliers through conducting tenders for priority projects [7, p. 19]. The second category (Make-II) included projects for the development and/or modernization of equipment prototypes, munitions and combat systems, intended for import substitution, but not funded by the government. Therefore, the first category of the program was largely beneficial for the major private Indian manufacturers which had obvious competitive advantages over MSMEs. By 2018, such players managed to win several large governmental contracts for the production of weapons and military equipment and machinery. These tenders were largely supported by the Indian government and the Ministry of Defence as fulfilling the conditions of transfer of technology to India under offset contracts with foreign manufacturers (e. g. between Indian TATA Power SED and Spanish Indra Sistemas or Indian Mahindra Defence Systems Ltd and British-American BAE Systems Inc). As for the involvement of the Indian MSMEs to the Make-II category, the most evident problems were related to the absence of governmental funding of such projects. Micro, small and medium enterprises faced significant problems with financing their participation in the Make-II projects, because it had to be completely their own spending [6, pp. 3, 8].

In 2018 the BJP government attempted to improve the situation with the involvement of private producers in the MIC by launching the Innovations for Defence Excellence (iDEX) initiative. The iDEX was supposed to provide financial support to the most promising developments and projects of the defence industry. Its main advantage is that this initiative supports not only defence industry major private players or MSMEs, but also R&D organizations, start-ups, individual inventors and Indian academic circles. Another important part of this policy was a new DRDO program, launched in 2019, which implied the transfer of its technologies to the Indian enterprises and start-ups for manufacturing certain types of weapons and military equipment. As a result, the share of private Indian suppliers of weapons and military equipment increased from less than 5% [8] in the financial year 2015–16 up to 22% of the total defence production in 2018–19 [9].

Despite some achievements in the Indian production of WMSE, the MIC dependence on the arms imports remained substantial. In the financial year 2013–14 the import of weapons and military equipment amounted to 53% [10], while in the financial year 2019–20 it was 41% of the total defence procurements in India [11]. The interim results of reforming the military-industrial complex apparently failed to meet the expectations

of the Indian government and the Ministry of Defence. In May 2020, Narendra Modi declared a new large-scale initiative — Atmanirbhar Bharat (“Self-reliant India”). It was rather a revision of the “Make in India” campaign, not substituting, but supplementing the latter. A special emphasis was placed on stimulating the domestic defence production. The BJP government’s goal was to procure no less than 75 % of weapons and military equipment for the Indian armed forces by domestic suppliers [12].

As part of this initiative, two key documents were published in 2020. They introduced significant innovations in the field of military industry of India. The Defence Acquisition Procedure (DAP) replaced the Defence Procurement Procedure, simplifying the planning and acquisition procedure. The new document provided for enhancement of defence production indigenisation and encouraging innovations, including through protectionist measures and prohibiting imports of certain categories of WMSE. The DAP was primarily focused on the liberalisation of restrictions on FDI to the military-industrial sector: now up to 100 % of foreign investments were now allowed under the condition of technology transfer to Indian enterprises. The second document was “The Draft Defence Production and Export Promotion Policy” (DPEPP). It set a very high benchmark for the Indian defence industry — to achieve Rs 1.75 trillion of the Indian weapons and military equipment production (USD 25 billion at the then exchange rate) and Rs 350 billion of the Indian WMSE exports (USD 5 billion at the then exchange rate) [13, p. 4]. The main purpose of this document was to develop mechanisms for the implementation of innovations that facilitate defence procurements, enhance the indigenization of production, and contribute to improving the quality of manufactured products. In line with these innovations, few substantial changes occurred in the DPSU system. Particularly, on the basis of 41 factories which had previously constituted the Ordnance Factory Board, seven new DPSUs were created in addition to the nine existing ones.

Different innovations of the aforementioned documents were also aimed at reducing high production costs and delays in weapons and military equipment deliveries. But the main issue was that this new stage of reforming the Indian MIC implied important steps towards the achievement of the “strategic self-reliance” of India’s defence sector. The results of the financial year 2022–23 showed that the share of armaments and military equipment produced in India and supplied to the Indian armed forces reached 75 % [14], while the total expenditure on defence procurement from foreign sources decreased to 36 % [15]. India’s defence production rose more than 12 % for the financial year 2022–23 and crossed the Rs 1 trillion (USD 12 billion) threshold for the first time, while defence exports rose by 24 % to about Rs 160 billion (USD 1.9 billion) [16]. Thus, India’s defence exports grew 23-fold since the financial year 2013–14 [17], and such an evident success became an attractive fact for the Indian mass media to evaluate the achievements of the Indian government in reforming the national military-industrial complex.

Nevertheless, despite the aforementioned figures, we remain sceptical about the Indian Government reaching its goals. In 2020, the Draft Defence Production and Export Promotion Policy (DPEPP) document set a goal to reach the target of Rs 1.75 trillion in defence production and 350 Rs billion in Indian WMSE exports by 2025. In 2021, Indian Defence Minister Rajnath Singh confirmed the initial goal to achieve USD 25 billion in defence production and USD 5 billion arms exports by 2025 [18]. Yet in 2022, he lowered the defence production target to USD 22 billion [19]. The point is that during the period of 2018–2023 the exchange rate of Indian rupee against US dollar dropped by approximately

20%. Therefore, such an adjustment of the DPEPP target was quite expected. It is noteworthy, that the exports target of USD 5 billion had not changed. Taking into account the noticeably increased dynamics of the Indian WMSE production and exports, it still appears unlikely that the Indian defence industry will be able to increase product yield from USD 12 to 22 billion for the time remaining until April 2025. The aim to increase the Indian defence exports from USD 1.9 to 5 billion at the same time seems less and less achievable. We believe that the initial target seems to be exaggerated, while the Indian military-industrial complex is actually still facing problems that impede the expected growth of the national production of the WMSE.

Conceptual and Institutional Factors

The Republic of India is known for its heavy-handed bureaucracy. The defence industry and procurements are no exception. The Ministry of Defence and other authorities regularly publish and supplement conceptual and legal documents, related to defence procurement procedures, export plans, policies for development in certain areas, etc. However, such documents are often very general in nature and may have several interpretations, or even contradict each other [20]. Amit Cowshish notes that different conceptual and procedural elements are mixed even in such a fundamental document as the 657-page Defence Acquisition Procedure 2020. This causes a significant inflexibility of the described procedures, ambiguous perception and difficulties in implementation for the vendors, both from the Indian MSMEs and foreign manufacturers [21].

“Grand Strategy” and Priorities of National Security

Despite such comprehensive conceptual and legal documents, regulating economic, procedural and other aspects of the MIC, India faces the problem of an occasional and decentralised approach to defence procurements. For example, even within the DAP framework, a lack of a comprehensive national security strategy seems to be a significant issue. The India’s defence white paper could definitely facilitate a clearer understanding of the priorities for development and modernisation of Indian Armed Forces and particularly determine what acquisitions should be made in order to strengthen the national security in future. Apparently, integrated development of the Indian armed forces today implies increasing the self-sufficiency of the MIC and carrying out the reforms in line with India’s “self-reliance”. However, within the current geopolitical and geo-economic realities it seems difficult for the Indian government and MoD to formulate not only the “Grand strategy”, but a common development strategy of the armed forces as well. By prioritizing its national security needs, India can face a dilemma of clearly identifying its allies and foes, leaving less space for manoeuvre and aggravating relations with its opponents. Experts point out that after the Ladakh border dispute escalation in 2020, New Delhi should perceive Beijing as the main potential opponent [22–23]. Against this background, one might expect an Indian strategy for a comprehensive strengthening of its Armed Forces and a direct strategic deterrence of China in South Asia and the Indian Ocean Region. However, this does not correlate with the policy of “multi-alignment” (e. g. India’s “strategic autonomy”), the Indo-Chinese robust trade and economic ties, and India’s own industrial and economic capabilities at the present stage. Although the origins of such a

behaviour could be interpreted through differing IR foreign strategy approaches (balance of power theory or risk management theory, etc.), it could not help us to define the actual reasons for the absence of the Indian Grand Strategy or the development strategy for the armed forces. Thus, we may only assume that the specifics of the strategic planning in India do not allow the researchers to see with greater clarity the overall prioritisation for development of the Indian Armed Forces.

“Positive Indigenisation”

A number of various measures devised to “protect” the Indian MIC and foster domestic WMSE production can also be assigned to the category of conceptual and legal factors. A good example of the BJP government protectionist policy is the introduction of a “positive indigenisation” list in 2020, which identify weapons and military equipment products prohibited for import in order to encourage the Indian manufacturers. For instance, the fourth list published in 2023 included 928 systems, subsystems and spare parts [24]. It is noteworthy that the lists contain a huge selection of not only spare parts, but also technologically sophisticated products which are to be developed and produced by Indian enterprises for a period between 1 to 3 years. It is also notable that these lists even included systems that are underway but not ready yet for a full-scale production. Therefore, the indigenisation lists and the Defence Acquisition Procedure complement each other conceptually, but in practice they may contradict each other. The point is that the DAP gives preference to Indian-made equipment anyway, and therefore such provisional listing of works in progress seems excessive. In this regard, it is important to note a high degree of the politicisation of this topic. The regular expansion of the “positive indigenisation lists” seems to be a populist move, because it helps to improve official reports on import substitution in the Indian military-industrial complex. In particular, the lists are expanded by adding parts and components that are not high-tech and do not require special import control, but increase the share of Indian production in line with its “strategic self-reliance” [25]. The impact of the current political situation on this process seems to be evident in the context of the upcoming elections.

Offset Policy

Difficulties with the implementation of the offset policy should be outlined separately. India has been implementing its offset policy since 2005, aiming to attract foreign investments to its defence industry, ensure technology transfer and create various joint and licensed production facilities on its territory. One of the most important elements of the offset policy development is the issue of offset obligations (esp. compensation payments) by foreign original equipment manufacturers (OEM). The Government’s policy in this area has undergone multiple changes, especially with regard to options for repayment of compensations. The most common of them were conditions of joint R&D, maintenance and repair, as well as the condition for the vendor to choose an Indian counterpart in order to fulfil the obligations [26, pp.75–76]. Almost as frequent as annual changes in the offset policy made it rather unclear and uncomfortable for OEMs. For example, in the mid-2010s, foreign manufacturers often faced a problem of finding reliable Indian contractors to fulfil obligations. This in turn caused significant delays of the approval and

final signing of contracts [27]. The difficulty of fulfilling offset obligations in the Indian arms market is also reflected by the fact that between 2013 and 2021 nearly half of all signed contracts resulted in fines of USD 13.5 billion for non-fulfilment of conditions. Among the fined companies were leading global manufacturers of weapons and systems, such as Thales, Safran, IAI, etc. [28].

In 2022, Insight Consulting published a survey about the offset penalty cases in Indian defence sector. In most cases, these penalties were caused either by excessive initial obligations or by ambiguity in interpreting the rules of India's offset policy [29]. This study largely confirms the thesis about the vague nature of basic documents governing India's offset policy. A lack of important nuances in regulatory documents often leads to ambiguous interpretation of contractual terms and conditions. Different emerging contradictions are often corrected post factum in the MoD official press releases, but these documents have less legal effect [36, p. 88]. According to the Indian official reports, most common problems include under-realisation of offset obligations in the absence of proper supervision over the repayment process, poor selection of Indian partners, and long delays at various stages of procurement [30]. A prerequisite for offset obligations is the need to spend at least 30 % of the contract amount on the development of production and related areas of cooperation within India [31]. Thus, overstated requirements for OEMs and shortcomings in the legal framework often cause a foreign vendor refusal to enter the Indian MIC, or provoke it to evade offset obligations, which in turn increases risks of substantial penalties. As a result, numerous changes in India's defence production policy after 2014 have demonstrated the Indian Government's willingness to promptly adjust the dynamically changing system of military-industrial complex and correct its own mistakes. Nevertheless, the example of offset policy shows us that its actual implementation is stalling even in conditions of increased interest from the Indian government.

Bureaucracy, Competition, and Interagency Contradictions

Many of the above-mentioned factors depend largely on bureaucratic process of different military and civil services in India. This reduces the efficiency of the system of defence production and planning and leads to incoherence among leading R&D institutions, public and private manufacturing enterprises and end customers of WMSE [32]. The audit report on the effectiveness of the Indian Air Force in 2019, in particular, perfectly illustrates the problem of the Indian bureaucratic impact. According to this report, after submission, each procurement case had to go consistently through 11 stages of approvals by the Air Force headquarters, Ministry of Defence, Ministry of Finance, and other bodies. And such request could be processed up to 5 times at each stage [33, pp. 31–32]. Such a decentralised and multi-staged decision-making process caused long delays and cost overruns in procurement, lack of accountability and diffusion of responsibility [34].

Furthermore, contradictions often arise between the main participants of the defence production such as the Ministry of Defence and the Department for Promotion of Industry and Internal Trade due to overlapping of powers. In addition, the Ministry of Defence enjoys great autonomy in determining the defence procurement strategy. However, in the case of disagreement with the position of the MoD, the Indian Government can disapprove of the Ministry's plans and ask for reconsideration [35]. A similar situation

can be witnessed between different services of the Indian Armed Forces, which compete with each other for defence budgets and authority. Against this background, although the Indian government's policy is aimed at strengthening the involvement of private business and MSME in the defence industry, it contradicts the interests of DPSUs which have been enjoying governmental support and holding a privileged position for decades.

Economic Factors

Foreign Direct Investment

Reforming of the military-industrial complex is linked with the issue of foreign direct investment (FDI). The BJP government has been trying to attract foreign investments to the Indian military industry by different means. Similar to the offset policy, the FDI rules and restrictions in India were revised multiple times in order to make needed corrections, but it didn't help. Even after implementation of several changes and innovations during the last two or three years, current Indian statistics confirms that FDI in the Indian defence industry remain at extremely low levels. According to data provided by the Indian Parliament, excluding the disastrous pandemic period of 2020–2021, when only USD 0.63 million was attracted, the average annual FDI from 2018 to 2022 was only USD 2.2 million. Although during the period from April to September 2023 FDI increased to USD 3.21 million [36], one can notice that the total level of foreign investment in the Indian defence sector is absolutely insufficient. It seems that the main reason lies in the foreign investors' concerns not only about their potential benefits, but the safety of their investments to a greater degree. FDI in the Indian MIC carries high risks and low profitability. This state of things constrains not only the attracting of new investors, but the development of the defence industry as a whole.

That is why the BJP government is trying to attract more and more foreign investors by liberalising this sector. In September 2020, it allowed FDI under automatic route of up to 74% and up to 100% through Government route "wherever it is likely to result in access to modern technology" [37]. Furthermore, the Government of India has launched several steps to encourage investment in the defence sector (e. g. webinars for foreign companies, establishment of an information centre about investment opportunities and procedures) [38]. It seems to demonstrate that protectionist measures have not yielded the expected results. Therefore, the Indian government decided to liberalise the regulations in order to change the existing negative trend. Moreover, higher multipliers and additional benefits were offered for investments to the Defence Industrial Corridors (DIC) in the states of Uttar Pradesh and Tamil Nadu [47]. Although these two projects were launched in 2018 and 2019, the combined investment into these DICs remains very modest. As of 2023, potential investments under hundreds of signed memorandums of understanding exceed the Government's plans to attract Rs 100 billion (USD 1.3 billion) to each Defence Industrial Corridor. However, to date, actual investment to these DIC projects has amounted to about Rs 24.5 billion in the Uttar Pradesh, and Rs 39 billion in Tamil Nadu [39]. It largely confirms a lack of interest among investors and manufacturers, despite a great importance of these projects for the Indian military-industrial complex.

Defence Budget Structure and Pension Reform

The problem of reducing pension payments in the Indian Armed Forces is one of the most difficult. Traditionally, payments of pensions constitute a large part of the overall defence budget of India. Pension payments amount to Rs 1.4 trillion (USD 17.2 billion) of the defence budget which is Rs 5.94 trillion (USD 73.8 billion) for the financial year 2023-24 [40]. Over the past 15 years, the share of pension payments in the defence budget has almost doubled and now it is more than 23%. Taking into account the salaries of military personnel, about 53% of the annual defence budget is spent on personnel and pensions [41]. At the same time, capital expenditures in the budget have been steadily decreasing in recent years and fell from 32.4% in 2008–2012 to 23.4% in 2018–2022 [40]. The budget allocations to the development of the Indian MIC (e. g. defence procurement, modernization and R&D) are obviously limited. Therefore, the need to reduce the pensions share in the defence budget poses a serious challenge to the Indian government. At the same time, a sharp reduction in pensions or salaries may provoke discontent among broad swathes of the Indian population and undermine the motivation of future armed forces personnel.

In order to change the situation, the BJP government initiated the Agnipath Scheme in 2022, which seriously revised India's system of military conscription. The Agnipath Scheme now recruits new soldiers (aka "agniveers") under the age of 21, who do not aspire to an officer career and may only sign a four-year contract to serve in the Indian Army. After the end of their service, most of them remain in reserve without the right to get military pensions [22, p. 289]. It is supposed that after that only a quarter of the agniveers may continue to serve in the Armed Forces and sign standard 15-year contracts with the Ministry of Defence, which imply the payment of pensions. Thus, the Government intends to gradually reduce the overall expenditure on pension payments. The implementation of this program has predictably faced significant dissatisfaction of those who were interested in long-term contracts. Critics from the military pointed out that the conditions of the scheme were better suited for the bloated staff of the Army, while the Navy and Air Force require a longer service, due to a more complex process of gaining needed skills [42]. However, it is difficult to unambiguously assess this reform today, since its outcomes will become clear only in the long run.

R&D Spending and MSME Funding

The aforementioned attempt to balance defence budget expenditures through personnel reforms is largely explained by the need to allocate funds to R&D and other development projects. In 2018–2022, an average of 4.3% of total defence expenditures was spent on these needs. The Indian analytical community have repeatedly pointed out that the budgeted expenditures on the modernisation of the Armed Forces and R&D are extremely low and will not allow to achieve the ambitious goals of the BJP government [43]. It should be noted that the defence budget for the financial year 2023–24 provides for an increase in total spending on the modernisation of the Armed Forces and development of armaments of up to 29.1% of the total budget. The financing of R&D will therefore increase to 7.2% [40]. However, R&D expenditures in China for comparison exceed 10% of its total defence budget [44], which exceeds the Indian budget by 3 times. Therefore,

India seems to have been unable to change the catching-up type of research and technology development in the military sphere so far. Moreover, it is clear that the money spending on R&D can probably give noticeable outcomes in the long run.

In this regard, we should remind that India's national research and development projects are mostly carried out within the framework of over 50 enterprises united under the Defence Research & Development Organisation (DRDO). However, it must be realised that the competitiveness and effectiveness of DRDO still remain at a relatively low level. The criticism is traditionally directed against the speed of new developments, low technical characteristics of new products and significant cost overruns. This unsatisfactory situation forced the BJP Government in 2023 to review DRDO and redefine its relationship with the Indian MoD, private business and MSMEs, as well as other organisations and enterprises [45].

Therefore, better involvement of private business and MSMEs in the R&D and defence production becomes an important task for the BJP government. The insufficient involvement of private Indian businesses is likely to be caused by the weak governmental support, both financial and regulatory. Therefore, problems with the implementation of innovations, improvement of existing products and development of state-of-the-art engineering are likely to remain the distinctive features of the Indian military-industrial complex at the moment. However, the Indian government is trying to reverse this trend in India's 2023–24 defence budget by approving governmental support for MSMEs in the amount of Rs 90 billion (USD 1.2 billion) with a loan rate, reduced to 1% per annum [40]. At the same time, it should be taken into account that the successful implementation of these crucial measures will take time and may not be as effective as expected by the government.

Technological Factors

The level of production and technology development of India directly affects the reforming of the country's military-industrial complex. It is reflected in the quality of products, the availability of infrastructure and components. We may make some assumptions about the trends and specific problems of the Indian defence industry, relying on a number of documents and certain indirect indications. It can be noted that the industrial base of the Indian MIC is growing primarily on the basis of large private Indian players (e. g. Tata Group or Mahindra), joint ventures (e. g. Dassault Aviation and Reliance Group; Thales and Bharat Dynamics Ltd., etc.) and governmental funding. However, foreign OEMs often have to spend much time finding Indian partners, because of strict requirements for production capabilities. The Indian Armed Forces regularly face delays in deliveries due to various technological problems which are typical for a large part of Indian manufacturers.

It is noteworthy that until 2017 a special Indian governmental audit unit used to publish detailed reports about major technological problems in the national defence production facilities. After 2017, such reports were either not published or published in an abridged version [46]. It should be also emphasised that the role of audits is traditionally important for the Indian society in the context of relationships between various socio-political groups. The Bofors scandal during the government of Rajiv Gandhi is a good example of the important role of audits, which capture the attention of broad sections of

Indian society. Such documents turn out to be a significant source of information about the problems in the armed forces and also in defence production and procurement. The partial or complete unavailability of audits to the general public in India after 2017 means that the BJP government is trying to avoid disclosing information that could undermine the assessment of effectiveness of its reforms in the MIC.

In particular, further analysis of available audits from 2006 to 2016 shows that the most common causes of delays in defence procurement were due to technological problems [32, p.59]. Technical complexity and limited resources become one of the key obstacles for timely implementation of numerous projects. Moreover, L. Behera adds that technological problems are especially typical for contracts with state-owned DPSUs and DRDO enterprises, because of a lack of technological skills and resources needed for production [47, p.95–97]. An insufficient level of production capabilities affects the quality of the Indian armaments and equipment. This is indirectly confirmed by multiple media reports on various incidents, related to the reliability of Indian WMSE. A telling example is that four of seven Dhruv helicopters purchased by Ecuador in 2009 from the industry leader Hindustan Aeronautics Limited crashed due to technical malfunctions of a period of several years.

A more recent example is India's construction of its own aircraft carrier INS Vikrant. This naval milestone was intended to demonstrate that the Indian military-industrial complex could master such critical defence production technologies. The contractor, Cochin Shipyard Limited, collaborated with the largest private conglomerate Tata Group, but even such a partnership did not ensure quick results. The initial acceptance date of the aircraft carrier was rescheduled from 2016 to 2022, while its actual operational deployment is planned for 2024, due to the need for refits and adjustments of the ship's systems. Besides, the Indian government had to agree to a sixfold cost over-run for the aircraft carrier whose technological level is at least a generation behind its Chinese counterparts [48]. Therefore, although India has demonstrated the ability of implementing independently such technically complex projects, this example should be viewed as an important stage in gaining necessary shipbuilding experience rather than reaching a new technological level in naval construction.

Conclusion

Although the critical analysis in this article focuses on the problematic aspects of the development of the Indian MIC, we should underline the obvious and significant development of the Indian defence industry during 2014–2023. The achieved successes were made possible due to a number of landmark reforms by the BJP government under the leadership of Narendra Modi. This policy will undoubtedly have a beneficial effect on the state of the defence industry and allow India to make giant strides towards strategic self-reliance in order to ensure its national security [49]. On the other hand, permanent changes of the regulatory framework and game rules in the MIC indicate that the system of defence management and production is still facing numerous difficulties. Their prompt resolution demands from the Indian government a decisive response in the regulation of the military-industrial complex.

As a result, the authors have certain doubts that the planned volumes of the Indian WMSE production and exports are achievable by 2025. The plans of the BJP government

seem exaggerated and seriously dependent on the political environment, because the success of the defence industry supports the overall course of reforms initiated by Prime Minister Modi. We came to the conclusion that such intensive qualitative and quantitative development of the MIC is unlikely to meet the deadline of 2025 due to the serious negative impact of a number of factors on the Indian MIC development. The considered factors are often inherent to the military industry and determined by the general features of India's development in recent decades. It is obvious that countering such negative factors that are systemic in nature, requires significant and long-term efforts from the Indian political leadership, military and civilian bodies, governmental and private enterprises in India.

The proposed groups of conceptual-institutional, economic and technological factors are difficult to rank according to degree of their influence. The main keynote of the first group is the great difficulty of overcoming the political-strategic, regulatory and administrative-bureaucratic contradictions which significantly affect management and planning in the defence industry. In particular, the absence of the national security strategy, supplemented with the political environment, slow down the qualitative development of the Indian MIC. Despite serious positive changes in recent years, conceptual and bureaucratic obstacles continue to hamper ongoing reforms and preserve their significant negative potential. The BJP government's serious attention to solving the problems from the second group is aimed at revising the structure of defence spending and eliminating difficulties in attracting foreign direct investment. This policy will have positive effects, but most likely in the long term. The BJP offset policy and its FDI strategy allows us to conclude that India is gradually moving towards the unification of its regulatory documents in these fields. Moreover, this process is followed by a more thorough and in-depth elaboration of economic measures that are aimed at strengthening the relations with foreign producers and investors. The most obvious are the technological factors from the third group. They are largely associated with general problems of defence production and planning. In fact, insufficient development of the industrial base, coupled with insufficient governmental R&D support from the Central government, significantly complicates the production of high-quality WMSE. It means that India is not fully capable of mastering critical military production techniques and developing its own hi-end military technologies to decrease its overdependence on sophisticated arms imports at present time.

That is why the Indian government places special emphasis on attracting private business to the MIC, importing military technologies, attracting FDI to its defence production and enhancing cooperation with the world's largest WMSE suppliers. At the same time, it should be concluded that numerous reforms of the Indian MIC, aimed at its improvement and development, take time to generate results. Therefore, as noted above, the previously considered factors will most likely continue to have a negative effect on the entire system of the Indian MIC in the short and medium terms.

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Основные факторы, сдерживающие реформирование военно-промышленного комплекса Республики Индии в период 2014–2023 гг.

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В данной статье предпринята попытка оценить негативное влияние ряда факторов на процесс реформирования военно-промышленного комплекса (ВПК) Индии под управ-

лением правительства «Бхаратия джаната парти» (БДП) в период 2014–2023 гг. Авторы выделяют три группы факторов, которые оказывают наибольший негативный эффект на всю систему оборонной промышленности Индии на сегодняшний день. Концептуально-институциональные факторы связаны с применением и регулированием основополагающих законов и правил в ВПК, отсутствием общей стратегии развития индийских вооруженных сил, политизацией протекционистских мер, проблемами реализации офсетной политики, а также влиянием бюрократии и межведомственных противоречий. Экономические факторы включают в себя проблемы с привлечением прямых иностранных инвестиций и попытками изменить структуру оборонных расходов, снизив траты на выплаты пенсий и увеличив траты на привлечение частного бизнеса в ВПК. К технологическим факторам относятся главным образом причины и следствия проблем с качеством и скоростью выпускаемой продукции индийскими оборонными предприятиями. Проведенный прикладной политический анализ, ретроспективный анализ данных и контент-анализ основных документов и материалов, связанных с развитием индийского ВПК в исследуемый период, позволяет сделать вывод о том, что совокупность рассмотренных факторов имеет системный характер и оказывает значительное негативное влияние на отрасль. Эти факторы мешают реализации амбициозных целей правительства БДП, ведущих к достижению «стратегической автономии» в наиболее важных для национальной безопасности сферах. Кроме того, проблемы индийского ВПК усугубляются влиянием политической конъюнктуры. В результате решение этих проблем в кратко- и среднесрочной перспективе представляется маловероятным, однако в долгосрочной перспективе проводимые индийским правительством реформы должны нивелировать негативный эффект от рассмотренных факторов в значительной степени.

Ключевые слова: Индия, военно-промышленный комплекс, реформы, оборонное планирование, оборонный бюджет.

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