# Strengthening domestic industries' human resource management through Atmanirbhar Bharat Abhiyan structural reforms: An empirical study with reference to heavy vehicles factory, Avadi

P. Thangapandian<sup>1</sup> R. Mathaiyan<sup>2</sup>

#### **Abstract**

The Hon'ble Prime Minister raised a clarion call to make India - 'Atmanirbhar Bharat' or 'Self-Reliant'. The aim is to make the country and its citizens self-reliant in all senses. The Prime Minister, further outlined five pillars of Atmanirbhar Bharat — Economy, Infrastructure, System, Vibrant Demography and Demand. India has been meeting its critical defence requirements through imports or Transfer of Technology for many years. To reduce this dependence, the Central Government has embarked on a modernisation plan for defence production, with corporatisation of Ordnance Factory Board into seven Defence Public Sector Units. This restructuring can be made effective if organization plan and policies are aligned to the needs and aspirations of the employees. This paper attempts to study the opinion and status of employees, their job satisfaction, expectations, as employees of new public enterprises under changed circumstances and suggesting for self-reliance through capable human resources.

**Keywords:** Atmanirbhar bharat abhiyan, self-eeliant, heavy vehicles factory, Defence Public Sector Unit (DPSU), Ordnance Factory Board (OFB), Armoured Vehicles Nigam Limited (AVANI).

## 1. Introduction

The whole world was in a VUCA (volatile, unpredictable, complex and ambiguous) state in the year 2020 due to COVID-19 pandemic. The world has not faced a pandemic of such scale since the Spanish flu 100 years back. Supply chains were broken and health infrastructure faced tremendous pressure. However, India with its stable parliamentary political system and patriotic citizens with a

<sup>&</sup>lt;sup>1.</sup> Ph.D. Research Scholar, Department of Public Administration, IDE, University of Madras, Chennai.

<sup>&</sup>lt;sup>2</sup> Professor, Department of Public Administration, IDE, University of Madras, Chennai.

mindful leadership on government handled the situation very effectively. The nationwide lockdown was enforced in the 4<sup>th</sup> week of March, 2020 in India. It was required to be continued till 4<sup>th</sup> week of May, 2020. Wherein, an experienced and thoughtful leadership came out with a new idea 'Atmanirbhar Bharat' during 2<sup>nd</sup> week of May, 2020 to rejuvenate the economic growth of the country towards self-reliance.

#### 2. Atmanirbhar Bharat: An overview

The Government of India announced a special economic and comprehensive package to the tune of Rs. 20 lakh crores which is almost equivalent to 10% GDP of India to fight against COVID-19 and bring structural reforms in various sectors. The aim of this self-reliant mission is to develop the country, organizations, manpower and make citizens self-reliant in all respect. Followed by this, Honourable Finance Minister of India announced various structural reforms across eight sectors paving way for 'Atmanirbhar Bharat' on 16th May, 2020. Supply Chain Reforms for Agriculture, Tax rationalisation, capable human resource and strong financial system, Defence policies. etc., are a few mindful and bold reformation activities among this stimulus.

# 3. Formation of new Defence Public Sector Units (DPSUs) under Atmanirbhar Bharat

To improve autonomy, accountability and efficiency in Ordnance Supplies, the government decided to corporatize the Ordnance Factory Board (OFB) including one of its production units (i.e., Heavy Vehicles Factory, Avadi). Subsequently, seven new DPSUs were registered under Companies Act, 2013 during August 2021 by re-grouping 41 ordnance factories of OFB. All new DPSUs commenced their business with effect from 1st Oct, 2021. All the regular employees were also *en-mass* transferred on 'deemed deputation' status without deputation allowance on foreign service term initially for 2 years but, without change in their service condition to new DPSUs along with other assets and liabilities of respective production units. First set of CMDs and Directors for these companies were also appointed from the existing officers' pool of the OFB.

# 4. Evolution of Ordnance Factory Board (OFB)

The OFB have a reputed legacy dating back to more than 200 years and predates the establishment of any other legacy organizations. During the year 1775, British authorities established a Board of Ordnance in Fort William, Kolkata.

This marks the official beginning of the Army Ordnance in India in favour of economic interest of the East India Company of England. Subsequently, it was useful for their arms and ammunition production for augmenting their political hold in India.

OFBs have large set-ups for other associated activities and welfare of employees. OFB with its factories were also called as "Fourth Arm of Defence" and "Force behind the Armed Forces".

Year 1787	1801	1948	1962	2.4. 1979	Till, 30.9.2021
Gun Powder Factory, Ishapore	Gun Carriage Agency, Cossipore (now, Gun & Shell Factory) First production on 18.03.1802 – Commemorated as O.F Day	All O. Fs under Ministry of Defence	Creation of Department of Defence Production (DDP)	Creation of OFB under DDP	41 O. Fs, 9 O.F Learning Institutes, 3 Marketing Centres, 5 Controllerates of Safety under OFB.

Table 1: OFB Legacy Progress.

# 5. Establishment of Heavy Vehicles Factory (HVF), Avadi structure under OFB

Heavy Vehicles Factory (HVF) was set up by MoD, Government of India at Avadi, Chennai in 1961 towards defence preparedness in the field of battle tanks and armoured vehicles. Thus, the first battle tank variant 'Vijayanta' was produced with the technical support of United Kingdom and rolled out on December 29, 1965. Later, HVF was brought under the administrative control of OFB under the Department of Defence Production (DDP), MoD on August 1, 1980.

HVF being a strategic Heavy Engineering Industry having high core competency in the manufacture of Armoured Combat Vehicles started to manufacture T-72(Ajeya), T-90S(Bhishma), MBT Arjun Tanks and their variants subsequently with its strong skilled and technically competent manpower over the period. The core function of the HVF is manufacturing state of the art battle tanks with its variants which are used as leading Armoured Vehicles in the Land Systems by Indian Army.

#### 6. Status of HVF, Avadi under Atmanirbhar Bharat

HVF was also one of the 41 factories under OFB till September 30, 2021. HVF, Avadi with its distinct identity manufactures battle tank variants. The unit has around 5000 employees across Group – A, B & C categories. On corporatisation, the assets and liabilities along with all employees were transferred with effect from 1<sup>st</sup> Oct, 2021 to new DPSU. This conversion process is a part of strategic action of the Government to attain the self-reliance in defence manufacturing and preparedness. This is a structural reforms initiative under 'Atmanirbhar Bharat', as per Government of India. Accordingly, HVF, Avadi is now a production unit of Armoured Vehicles Nigam Limited (AVANI) which is one of the seven newly created DPSUs.

# 7. Organizational Structure of HVF, Avadi

The present organizational structure (organogram) of HVF under DPSU is given in Figure 1.

# Transformed Status of HVF and Employees

DDP, MoD through one of its Office Memorandums dated 24th Sep, 2021 transferred the surplus land of 43.81 acres of HVF as part of assets & liabilities transfer to new DPSU –AVANI. All transferred employees are now under the managerial control of newly created DPSU – AVANI. Thus, the HVF as a production unit under AVANI needs to perform towards the self-reliance goal 'Atmanirbhar Bharat Abhiyan' with existing manpower and the net asset value of Rs.10,907 Crores & authorised share capital of Rs.12,500 Crores.

# 8. General perception on Human Resource Management

Human Resource Management (HRM) shall be defined as the art of recruiting, developing and maintaining competent workforce with skill mix of to achieve and accomplish the goals of an organization in an efficient manner. According to the Invancevich and Glueck, "HRM is concerned with the most effective

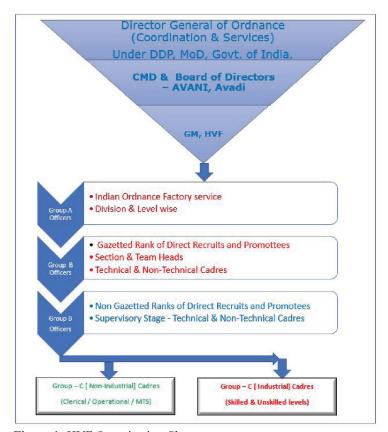


Figure 1: HVF Organization Chart

use of people to achieve organizational and individual goals. It is the way of managing people at work, so that they give their best to the organization". According to Dessler (2008) the policies and practices involved in carrying out the "people" or human resource aspects of a management position, including recruiting, screening, training, rewarding, and appraising comprises of HRM.

HRM refers to a few sets of functions and activities designed and carried out in order to maximize both employee as well as effectiveness of the organization. The main role of HRM is to plan, develop, and administer policies and programmes designed to make best use of an organizations human resources. The objectives are: (a) effective utilization of available human resources, (b) developing desirable working relationships among all stakeholders of the organizations, and (c) paving way for maximum individual development. According to Dave Ulrich, Human Resources plays

Change Agent Role- making change happen, and in particular, help it happen fast among other roles. Hence, a good organization requires good trained, skilled and best understanding Human Resources to attain its goals under any changed or new circumstances.

## 9. Human Resource Management in new DPSUs

Physical resources such as plant & machinery, materials and technology alone cannot achieve the strategic goals. It is the people who will craft strategies, align with the objective and execute them effectively to accomplish the results and goals. Also, changed environments always compel organizations for restructuring and change management. Such change in organizations needs to be reinforced through well-equipped Human Resources only. Further, cultural changes and adaptations during transformation in an organization are most important rather than mere process or operational changes. Without cultural adaptations by employees, there is no way for doing successful business in any organization. Here, the HVF employees are now required to work as Public Sector Unit employees with cultural adaptations and not government department employees though their service conditions are unchanged. Thus, Human Resources play a vital role here.

## 10. Objectives of the study

This study primarily focuses on strengthening HRM through Atmanirbhar Bharat Abhiyan structural reforms in HVF, Avadi by categorising certain specific objectives:

- i. To explain the origin and development of Atmanirbhar Bharat Abhiyan structural reforms.
- ii. To describe the organizational structure and functions of HVF, Avadi.
- iii. To identify the optimum utilization of Human Resources in addition to other goals and unleash new growth potential and innovation in ordnance factories etc., and
- iv. To analyse the opinion on their proposed decisions regarding various categories of employees including job satisfaction, pay, their transfer/absorption and pension & other terminal benefits of the employees, etc.

Hence, this study would help the management and government in overcoming the shortcomings, if any in systems or HRM and further appropriate planning to attain the goal of self-reliance by ensuring efficiency, accountability of these new DPSUs and to improve the autonomy in Ordnance Supplies, with

the support of existing Human Resources and strengthening main stakeholders, (i.e., employees) in nation building.

## 11. Research methodology

Research methodology consists of research design, sources of data collection, sample size, sampling type and sampling unit.

#### 11.1 Research Design

The research design of the present study is of "descriptive and analytical in nature".

#### 11.2 Sampling Design

This survey mainly focuses to understand the opinion on various HR issues of HVF employees post corporatisation with regard to 'Atmanirbhar Bharat Abhiyan' initiatives. The survey was done through a 28-points questionnaire covering basic profiles of employees, policy change and related matters in view of strengthening the domestic industries interdependence through a strong HRM. Due to COVID-19 restrictions, employees could not be met inperson. Hence, an online Google form was designed on the subject – "Survey - Corporatisation of OFB (including HVF) into new DPSUs - Role of People in Atmanirbhar Bharat" and the employees were requested to fill up and submit through online. All responses have been taken into consideration for data processing, analysis and further interpretations.

#### 11.3 Sample Classification

The authors have conducted the survey from employees of HVF, Avadi. Investigation is at their liberty while choosing sample from each of the categories. The following table 2 portrays the sample split up as clearly as possible: -

Category	No. of Employees under group
Group -A	6
Group-B (Gazetted)	16
Group-B (Non-Gazetted)	11
Group-C (Industrial)	11

Table 2: Details of Samples collected.

Group-C (Non-Industrial)	6
Total	50

#### 11.4 Sources of Data Collection

Primary Data: The primary data in this study has been collected by way of well-structured questionnaire circulated to employees of HVF, Avadi.

Secondary Data: Secondary data are the data collected by parties not related to this study, but collected these data for some other purpose and at different time in the past.

#### 12. Statistical tools used

- Percentage Analysis
- ii. One-sample t-test
- iii. Confirmatory Factor Analysis through Structural Equation Model

#### 13. The framework

The Human factor is the most important element of change management. One such model of change management, which has the individual at the forefront is ADKAR (Awareness, Desire, Knowledge, Ability and Reinforcement) model created by Jeffery Hiatt.

#### **Prosci ADKAR Model**

A FRAMEWORK TO ACHIEVE INDIVIDUAL CHANGE



Figure 2: ADKAR Model

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The authors have attempted to ascertain the effectiveness of the change management process initiated in the OFB by way of conversion into seven DPSUs by using the ADKAR framework.

## 14. Results and Findings

**14.1** Awareness: Employees' Awareness or Knowledge on Policy reforms.

A survey was conducted among the employees of the HVF to assess the awareness of employees about the 'Government Policy regarding Conversion of OFB including HVF into one or more DPSUs discussed with its Stakeholders like Union / Association / Federations etc.' About, 88% of the respondents stated that they were fully aware of the government's decision, whereas remaining 12% of respondents stated they were aware 'to some extent' of the government's decision. The high level of awareness would satisfy the first requirement of effective change management under the ADKAR model.

**Table 3:** Category wise Employees' Awareness regarding Policy reforms.

Were you aware of the Government Policy regarding Conversion of OFB including HVF into one or more DPSUs discussed with its Stakeholders like Union / Association / Federations? etc.

Category	No. of Respondents	Yes	No	To Some Extent
Group A Gazattad	6	6	0	0
Group A-Gazetted	0	0	U	U
Group B-Gazetted	16	13	0	3
Group B-Non-Gazetted	11	10	0	1
Group C-Industrial	11	9	0	2
Group C-Non-Industrial	6	6	0	0
Total	50	44	0	6
Percentage	100%	88%	0%	12%

#### **14.2** Desire: Desire to work on 'Deemed Deputation' status

The government department employees were transferred and posted to public enterprises on 'deemed deputation' status without deputation allowance. Hence, their level of desire was assessed as follows: -

**Table 4: Desire to work on Deemed Deputation Posting** 

Are you desired to work on Deemed Deputation under a DPSU?								
Category	No. of Respond- ents	Partially	Fully	To Some Extent	Not at all			
Group A-Gazetted	6	2	3	1	0			
Group B-Gazetted	16	1	6	4	5			
Group B-Non-Gazetted	11	0	6	5	0			
Group C-Industrial	11	0	11	0	0			
Group C-Non-Industrial	6	0	6	0	0			
Total 50 3 32 10 5								
Percentage 100% 6% 64% 20% 10%								

Figures and percentages in Table 4 above bring out the desire of employees to work on deemed deputation status in all cadres. Overall 6% respondents desire 'Partially' and 64% respondents desire 'Fully'. Totally, 20% respondents desire 'To some extent' with deemed deputation status. All these respondents may be considered as a sign of change acceptance resources for various reasons. The organization may further motivate these partially, fully and to some extent desired respondents to achieve the goal. 10% respondents expressed their desire as 'Not at all'. This category of respondents may be considered for suitable developments and motivations, before procuring alternate source of manpower. Also, the partially, fully and to some extent desirous employees may be retained without disturbances. Grievances, if any of these employees may also be redressed on priority, before it affects other functionaries of the organization.

#### 14.3 Desire: General willingness of employees for Absorption into DPSU

This is one of the most crucial and core assessments of this study post corporatization. As all the present employees are on deemed deputation under government service condition, there will be no DPSU rules governed employees till further procurement either on direct recruitment or on permanent absorption basis. It could be understood from one of the office memorandums issued by DDP on 24th Sep, 2021 that there will be a good effort for absorbing the existing employees into new DPSUs by providing attractive pay package with equivalent or higher service conditions. In this background, it was felt that the individual employee might not express his/her willingness for absorption at this survey stage without knowing the offer of the government. Hence, the question was framed in general as 'Are the employees willing to get absorbed into new DPSU (AVANI) generally?' Various scenarios of the responses are as follows: -

**Table 5:** General willingness for absorption

Are the employees willing to get absorbed into new DPSU (AVANI) generally?								
Category	No. of Respondents	Partially	To Some Extent	No	Yes			
Group A-Gazetted	6	3	2	1	0			
Group B-Gazetted	16	6	0	10	0			
Group B-Non-Gazetted	11	4	1	6	0			
Group C-Industrial	11	5	1	5	0			
Group C-Non-Industrial	6	3	0	3	0			
Total 50 21 4 25 0								
Percentage 100% 42% 8% 50% 0%								

From Table 5, it may be seen that the overall willingness for sure absorption as 'Yes' is absolutely Zero percentage. A total of 50% respondents expressed as 'No'. At the same time, 42% respondents opined as 'partially' and 8% respondents 'to some extent', put together 50% respondents indicated the willingness for absorption into new DPSU.

The 50% respondents who are willing to be absorbed in AVANI may seem like a neutral attitude among employees, but if the absorbed employees (first movers) are put on a well-defined career path, the prcentage of respondents in favour of absorption could rise significantly.

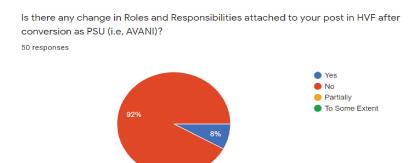


Figure 3: Overall change in Roles & Responsibilities of Posts.

#### 14.4 Knowledge: Change in roles and responsibilities of posts

When there is a change in management, control and other operations in any organization, it may also be required to change the roles and responsibilities of certain posts. It was assessed through following question: -

Figure 3 indicates that there is no major change in roles and responsibilities of the posts attached to the employees as 92% respondents stated 'No'. However, 8% respondents stated 'Yes'. This could be warranted based on the initial functional requirement of the organization post-corporatization.

#### 14.5 Knowledge: Satisfaction on working hours

This assessment is to understand the employees' satisfaction on working hours of the factory post-corporatization. Due to organizational structural change, there would be change in overall working hours either reduction in overtime working or increase in normal working hours.



**Figure 4:** : Post Corporatization – Working Hours

As per figure 4, total 82% respondents agree with working hours of the factory and thus opted 'Yes'. However, overall 18% respondents disagree and thus stated 'No' for the present working hours post corporatisation. This could be due to change in working or overtime hours or even change in shift patterns. Hence, the management needs to make further detailed study in this regard.

# 14.6 Ability: Assessment of length of service and retention feasibility in AVANI

The respondents' length of service in HVF was obtained through a question 'What is your length of service in HVF during this survey?'. This is to understand the span of service length of each category and to examine the retention feasibility in AVANI to meet out its requirement of skilled and professional human resources to attain the goal.

Table 6: Category-wise Length of Service

What is your length of service in HVF during this survey?							
Category	No. of Respondents	0-5 Years	06-15 Years	16-25 Years	>25 Years		
Group A-Gazetted	6	0	0	1	5		
Group B-Gazetted	16	2	5	5	4		
Group B-Non-Gazetted	11	2	4	3	2		
Group C-Industrial	11	1	2	2	6		
Group C-Non-Industrial	6	1	1	2	2		
Total 50 6 12 13							
Percentage 100% 12% 24% 26% 38%							

Table 6 shows the number of respondents from various span of service length in HVF. Overall, 12% respondents are from '0-5 years', 24% respondents from '06-15 years', 26% respondents from '16-25 years' and 38% respondents from 'above 25 years' of length of service in HVF. HVF being a high engineering factory and manufacturing armoured vehicles with its skilled and trained manpower may take appropriate efforts to retain these

manpower either on deemed deputation status continuously without changing their service condition till alternate trained manpower is positioned or arrange to absorb the required and willing employees offering higher pay package with mutually agreed better service conditions, according to their length of service which is just not a number of years, but also the level of technical competency on the field. In this regard, HVF and AVANI management may work out in detail for further developments.

#### 14.7 Reinforcement: Assessment of fear factors

In view of reinforcement activity, it was felt to assess the fear factors from employees' angle through a question 'What do you feel as most affecting factor(s) post-corporatization of the organization (HVF, Avadi)?' with broad options as follows considering different categories of employees:-

**Table 7:** Category-wise fear factors.

What do you feel as most affecting factor(s) post corporatization of the organization (HVF, Avadi)?								
Category	No. of Respond- ents	Pension & Other Terminal Benefits	Status	Job Security	Pay & Allow- ances	All of these		
Group A - Gazetted	6	0	5	0	0	1		
Group B - Gazetted	16	7	0	6	0	3		
Group B - Non-Gazetted	11	3	0	6	0	2		
Group C - Industrial	11	7	0	4	0	0		
Group C - Non-Industrial	6	0	0	6	0	0		
Total	50	17	5	22	0	6		
Percentage	100%	34%	10%	44%	0%	12%		

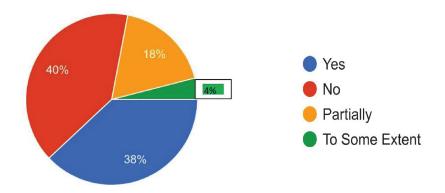


Figure 5: DPSU's efforts to increase the efficiency

As per Table 7 above, 34% respondents of all categories expressed as 'Pension and other terminal benefits', 10% respondents of Group-A category alone expressed as 'Status', 44% respondents of all categories (except Group-A category) expressed 'Job security', 12% respondents of all categories (except Group-C category) expressed 'All of these' as most affecting factors for them. Also, none expressed as 'Pay and allowances'. These responses may be considered as different fear factors of various categories of employees post-corporatization. Hence, HVF and AVANI management may take appropriate steps for employees to mitigate from all these worrying factors by enabling suitable employees' service protection rules and welfare schemes in consultation with them.

# 14.8 Reinforcement: Efforts of New DPSU to increase the efficiency in production plan, HR issues & finance.

This part is to assess from employees view 'Whether AVANI is taking enough efforts to increase the efficiency of the organization and bringing innovations in all areas such as production plan, HR issues & Finance, etc.?'

As per figure 5 above, 38% respondents stated as 'Yes', 18% respondents stated as 'partially', 40% respondents stated as 'No'. Thus, 4% respondents stated as 'to some extent'. Hence, organization may take further necessary steps to increase the efforts sincerely and also showcase the efforts taken effectively to make the employees understand and achieve the self-reliant status through them.

# 15. Suggestions based on the above findings

The following are the suggestions given by the authors to promote and strengthen the HRM of new DPSUs through Self-Reliant India Mission: -

- i. Employees participation in decision making process may be implemented effectively in new DPSUs. Group B Gazetted and Non-Gazetted respondents are found to be the middle management and supervisory cadres of the organization as per organogram. Hence, the management needs to make them understand the Government policy and utilise them effectively for attaining self-reliant target. They could also be the bridging structure between policy makers (Group A) and skilled task holders (Group C) of the industry. This relates to the new cultural adaptations of the organization towards the goal. Hence, strengthening this area may be helpful for industry's growth appropriately.
- ii. Management may assess and take necessary actions for changing roles and responsibilities of the existing posts and creating new posts depending upon the need of the organization and exercising its functional autonomy as a Public Sector Enterprise.
- iii. Group A category being a single top management cadre in the organization structure of pre and post corporatization, the cadre may take complete managerial responsibility in terms of disseminating all integrated instructions, guidelines, policies equally to all other categories and developing good Human Resources with regards to organizational goal.
- iv. It is understood that there is a considerable percentage (18%) of dissatisfaction among respondents regarding working hours post-corporatization. Hence, the management needs to make further detailed study and do the needful, in this regard to attain the organizational goal effectively.
- v. As 50% respondents are likely to be ready for absorption, the government and the DPSU may plan to come out with appropriate proposals for pay package and service conditions to realise this percentage and also to increase the number of absorptions more effectively, if so desire.
- vi. A considerable quantum of respondents felt that the efforts taken by DPSU to increase the efficiency of the organization and bringing innovation in all areas such as production plan HR issues and finance are not enough. Hence, the management needs to act on this appropriately and also take further necessary steps to showcase the efforts suitably.

## 16. Limitations of the study

The following limitations have been identified for the present study:

i. The study is confined to only HVF- Avadi, Tamil Nadu. Other units represent hub of DPSUs, but they are not covered by the present study.

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- ii. Some responses are biased and some statements of question pose difficulties to respondents and could not fill up some statement of questions by the respondents.
- iii. Sample Size chosen for this study is 50.

#### 17. Conclusion

The present study has achieved what it had to achieve by identifying research gap. Human Resource Development is always needed for every public sector development which is also an integral part of the Atmanirbhar Bharat Abhiyan structural reforms. Thus, in this way, the Human Resource Development through the Self-Reliant India mission is a process of increasing and strengthening the employees' performance who can ultimately increase the productivity of the DPSUs by using their education, experience, skillabilities, etc. It also helps the employees of DPSUs to adopt new advancement concerning technology, apprenticeship, entrepreneurial skills, etc. to improve the productivity of the DPSUs as part of Self-Reliant India Mission. It progressively leads to an increase in the DPSUs' productivity and heading towards an increase in GDP of the country. On this basis, it is proved that developing strong and satisfied human resource is a vital factor to promote and strengthen the domestic industries' performance and productivity including HVF, Avadi and AVANI. Best human resources and increase in productivity will constitute Self-Reliant India – Atmanirbhar Bharat.

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