Chapter VIII: Pricing of Products and Cost Control

Audit objectives
Whether the cost of production of various items had been recovered in issue of the items to the Services through efficient pricing mechanism.

Source of audit criteria
- *Pricing policy and mechanism;*
- *Targets for overheads fixed by OFB; and*
- *Cost estimates and actual cost of production.*

8.1 General

The pricing policy of the OFB aims at recovering the entire cost of production in respect of items issued to the Services. The prices are estimated at the beginning of the financial year based on actual cost of the previous three years and the current trend in material, labour and overhead cost. After analysing these inputs received from the factories, OFB generally fix issue price of each item in advance before commencement of a year. In some cases, the issue prices for certain items are revised mid-year based on further inputs received from the factories. The Ministry permits OFB to limit the annual price increase up to eight *per cent* on overall basis with emphasis to keep this to a minimum.

We observed that instead of following a uniform formula, OFB used different yardsticks and adopted an ad-hoc approach for fixing issue prices of different products as under:

- based on OFB's calculation of estimated price considering a predetermined overhead percentage to estimated labour cost of the factory;
- average of the estimated cost of the factory and that of the OFB considering different labour rate and overhead percentage;
- equivalent to factory's proposed/estimated cost received at the fag end of the year for 2008-09 in respect of OEFC and for 2010-11 in respect of OEFH;
- determined after addition of eight to 15 *per cent* with last year's issue price; and
- at the same level of last year, as it was already 20 *per cent* more than the actual cost in the last year.

Thus, absence of sound pricing formula and non-adherence to the existing pricing policy led to incorrect fixation of issue prices by the OFB. This coupled with factories' failure to control cost resulted in recurring losses in

OEFG in all four years. The rates were also exorbitantly high compared to market price for certain items, as discussed in the succeeding paragraphs.

8.1.1 Huge losses incurred by factories

OEFG sustained aggregate loss of ₹226.09 crore for issue of items to all the indentors during 2008-12. Details of factory-wise profit /loss are given in Table-34.

Table-34: Factory-wise profit(+)/loss(-)

(₹ in crore)

Factory	2008-09	2009-10	2010-11	2011-12	Total
OEFC	2.17	(-) 26.43	(-) 26.00	(-)42.84	(-) 93.10
OPF	1.16	2.76	(-) 4.09	(-)13.11	(-) 13.28
OCFS	(-) 13.90	(-) 46.93	(-) 37.67	(-)22.22	(-) 120.72
OCFA	(-) 14.21	(-) 7.76	(-) 5.15	(-)7.89	(-) 35.01
OEFH	3.16	5.84	12.97	14.05	36.02
Total	**(-) 21.62**	**(-) 72.52**	**(-) 59.94**	**(-)72.01**	**(-) 226.09**

The table indicates that only OEFH had earned profit in all four years, while OCFS and OCFA sustained loss in all four years. OPF and OEFC incurred loss in two and three years respectively. Despite this sub-optimal performance, OFB did not analyse the reasons for the persisting losses.

We analysed the issue prices of 65 items fixed by OFB with reference to the estimated cost of the factories and actual cost of production for the three years 2008-12 (**Annexure-VI)** and found that in 97 out of 121 instances, the issue prices fell short of the estimated cost by more than 10 *per cent* and up to 53 *per cent* in OEFC, OPF, OCFS and OCFA. Even the actual cost of production of these items had exceeded the issue prices by same percentages in 102 instances.

Despite the huge variations between the issue prices and the product cost, the OFB had not instituted any effective mechanism to analyse the reason for recurring loss year after year nor did it review the product profitability periodically in its meetings to take corrective measures.

Justifying the variations, OFB stated (April 2012) that prices were decided almost 18 months in advance of working out the actual cost of production. Hence, there were little variations and surplus/deficit became inevitable due to change in load/product-mix after finalisation of price, efforts undertaken by factories towards cost reduction and variation in market prices than those expected at the time of pricing.

The reply did not explain as to how 10 to 53 *per cent* adverse variations between actual cost and issue price had occurred. The reply was also silent on the failure of the OFB to review the actual cost and issue prices periodically to ensure effective cost control and recovery of entire cost of production through pricing mechanism.

8.1.2 Exorbitant price of OEFG's items compared to market rates

We observed that in respect of OCFS during 2009-10, actual cost of nine items was more than the estimated cost by 6 to 41 *per cent*. Against the factory cost of Trouser PW PC Khaki and Vest Woollen FS of ₹772 (in 2008-09) and ₹632 (in 2010-11) respectively in OCFA and OCFS, COD Kanpur procured these items at ₹195 and ₹122 respectively in 2009-10, revealing that the cost of these two OEFG items were as high as 396 and 518 *per cent* of the market rate. Further, as mentioned in Paragraph 5.5, the Director General, Sashastra Seema Bal had observed that the rates of OEFG produced items were as high as 300 *per cent* compared to market rates. This clearly indicates that lack of cost control made the product-mix un-remunerative and non-competitive.

8.2 High overheads and labour charges in cost of production

8.2.1 Overhead charges

Cost of production comprises direct material, direct labour and overheads. Overheads charged in ordnance factory include indirect labour cost, indirect stores, supervision, electricity, transportation, depreciation, *etc.*

OFB fixed (May 2006) a target for overheads as a percentage of direct labour charges for OEFC, OPF, OCFS, OCFA and OEFH at 120, 164, 115, 175 and 175 respectively for 2006-07. OFB did not fix any such target for the subsequent years for which no reason was recorded. Even on the basis of target for 2006-07, the actual percentage of overheads to direct labour charges was higher in 2008-09 in respect of OEFC, OPF, OCFS and OCFA at 154, 196, 158 and 178 while the same for OEFH was 150 *i.e.* less than the target at 175. In 2009-10, the position had improved in respect of all factories except OEFC where the percentage of overheads was higher than the target at 164. In 2010-11, the percentage of overheads was less than the target in all the factories, while in 2011-12, the percentage of overheads was more than the target for OEFC and OCFS.

Further, the percentage of overheads to the cost of production for the OEFG was higher ranging from 34 to 33 than 31 to 26 *per cent* relating to Ordnance factories as a whole, as detailed in Table-35.

Table-35: Factory-wise percentage of overhead to cost of production

Year	OEFC	OPF	OCFS	OCFA	OEFH	OEFG	OF Organisation
2008-09	26	37	40	41	37	34	30
2009-10	30	34	38	39	33	34	31
2010-11	28	39	33	39	32	33	27
2011-12	30	35	35	34	32	33	26

Amongst the five factories, the extent of overheads at OCFA was highest in the range of 34 to 41 *per cent* during 2008-12. High incidence of overhead (41 *per cent*) at OCFA in 2008-09 was mainly due to high indirect labour (90 *per cent*) and supervision charges (72 *per cent*) as compared to direct labour.

OFB stated in April 2012 that the overheads were higher in OEFG as they are labour intensive units and the labour cost had increased due to implementation of the Sixth Central Pay Commission's recommendations. It did not explain the significantly higher rate of overhead charges in OCFA.

8.2.2 Labour charges

Details of cost of production and labour cost of OEFG vis-a-vis OF organisation as a whole are depicted in Table-36.

Table- 36: Labour cost *vis-a-vis* cost of production

(₹ in crore)

Year	Cost of production (COP)		Percentage of share in OEFG	Labour cost		Percentage of share in OEFG	Percentage of labour to COP	
	OF orgn.	OEFG		OF orgn.	OEFG		OF orgn.	OEFG
2008-09	10610.40	659.55	***6***	768.10	136.35	***18***	***7***	***21***
2009-10	11817.89	669.00	***6***	1102.19	173.48	***16***	***9***	***26***
2010-11	14012.12	855.08	***6***	1318.41	237.25	***18***	***9***	***28***
2011-12	15933.44	961.17	***6***	1490.10	260.52	***17***	***9***	***27***

Analysis of the tabulated data reveals that OEFG had the share of only 6 *per cent* of the cost of production every year, being lowest among all the groups. In contrast, it accounted for 16 to 18 *per cent* of the direct labour cost of ordnance factories as a whole during 2008-09 to 2011-12. Further, though the percentage of labour cost to cost of production in ordnance factories as a whole ranged between 7 and 9 *per cent*, the same in OEFG ranged between 21

and 28 *per cent* during 2008-12 despite modernisation through procurement of CNC[18] machines.

8.3 Wide variation in cost of production of common items

We compared the cost of production of common items manufactured in two factories and observed wide variations in unit cost of production comprising material, labour and overhead as depicted in Table-37.

Table-37: Variations in cost of production of common items

Item	Factory	Material cost (₹)	Percentage of variation	Labour cost (₹)	Percentage of variation	Overhead cost (₹)	Percentage of variation
2008-09							
Parachute SD 8.5M	OEFH	2690.13	3	1442.26	16	2163.39	37
	OCFA	2783.82		1678.27		2953.76	
Tent 4M	OEFC	18935.88	1	1758.97	131	2708.81	194
	OPF	19172.16		4064.92		7967.24	
2009-10							
Tent 2M	OEFC	18495.70	4	2628.10	104	4237.16	17
	OPF	19225.52		5373.35		4940.79	
Tent 4M	OEFH	409.16	5581	5121.55	29	589.19	998
	OEFC	23242.63		3970.46		6471.86	
Parachute SD 8.5M	OCFA	2392.74	113	2508.00	66	2897.74	154
	OEFH	5100.11		4156.81		7351.33	
Trouser Combat	OEFH	221.42	52	351.54	52	318.84	93
	OCFA	336.00		533.50		616.20	
Jacket Combat	OEFH	158.41	81	291.38	48	228.12	119
	OCFA	286.51		432.05		499.02	
2010-11							
Tent 4M	OEFC	26152.40	51	5284.62	1509	6771.95	1121
	OEFH	39477.46		328.54		554.85	
Trouser PV DD OG	OEFH	195.72	19	55.31	456	93.47	269
	OCFS	164.65		307.80		344.69	
Trouser Combat	OCFA	324.70	34	522.02	22	580.80	26
	OEFH	433.99		428.95		729.21	
Parachute SD 8.5M	OEFH	3227.27	6	1591.75	41	2703.86	10
	OCFA	3412.21		2241.91		2970.68	
Fly outer of Tent 4M	OCFA	6207.38	13	90.35	3039	159.84	2174
	OEFC	5513.25		2836.21		3634.45	
2011-12							
Jacket Combat	OEFH	47.63	824	238.15	101	414.12	20
	OCFA	440.02		479.79		498.98	
Fly outer of Tent 4M	OEFC	7019.90	7	3011.47	2490	3880.60	1797
	OEFH	7489.24		116.29		204.58	
Net Mosquito	OCFS	162.66	97	163.80	516	238.29	716
	OEFC	321.13		26.61		29.22	
Bag Kit universal	OEFH	236.01	169	10.40	2145	17.68	1670
	OEFC	635.97		233.49		312.93	

Source: Annual Accounts of Ordnance and Ordnance Equipment Factories

[18] Induction of Computerised Numerically Controlled machines is expected to achieve savings in terms of reduction of material and labour cost

The table shows inexplicable variations in labour and overhead cost of common items ranging up to 3039 *per cent* and 2174 *per cent* respectively. Similarly, material cost in 11 out of 16 instances widely varied between 13 and 5581 *per cent*. Further, even in the same factory *viz.* OEFH, material cost for Tent 4M showed an abnormal increase within one year from ₹409 in 2009-10 to ₹39477 in 2010-11. The Factory management/OEF HQ did not analyse this wide variation.

In response to the query on huge variation (9552 *per cent*[19]) in material cost of OEFH, Accounts Office of OEFH stated (July 2012) that the value of material was booked on the basis of documents forwarded by the factory management. They, however, added that the factory management assured that such type of irregularities would be avoided in future. The reply itself indicates that the Accounts Office did not verify the documents before booking the cost of materials.

Compared to higher cost at one factory with the cost at another factory, there was extra financial burden of ₹105.47 crore in 16 instances (**Annexure-VII**).

Ministry's reply and our remarks thereon are indicated in Table-38.

Table- 38: Ministry's reply and audit remarks

Ministry's reply	Audit remarks
OEFC : Data given by Audit appeared to be incorrect. Overhead and labour cost would differ from factory to factory.	We adopted the cost data from Annual Accounts of OF Organisation. Besides, the Ministry had not furnished any correct data to us while contending the figures.
OEFH : Transfer vouchers for labour and material were not considered by Accounts Office while preparing Annual Accounts for 2009-10. This led to wide variation in cost for Air Force items in that year. For balance items, difference was due to compilation and linking mistakes.	The reply itself indicated the deficiency in accounting the different cost components without proper reconciliation and setting right the linking mistakes between the factory management and the Accounts office of the factories. Reply did not indicate corrective actions taken to compile the accounts based on reliable cost data.
OCFA : In general, higher labour and overhead cost was due to difference in house rent and transport allowance as OCFA is under A-1 city. For Jacket and Trouser, the material cost of OEFH could not be less than that of OCFA as the latter is the nodal factory for basic material. It needs to be reconciled. For fly outer 4M, the labour and overhead cost is less as the factory outsourced the same due to huge load.	Trade assistance or higher house rent/transport allowance in one factory cannot justify huge variation in labour and overhead cost up to 3039 *per cent* and 2174 *per cent* in two different factories. Reply does not indicate any reason for such huge variation and corrective actions taken to set right such variations.
OCFS : Labour and overhead cost in manufacture of trouser was higher compared to that of OEFH as the item might have been manufactured through trade in OEFH.	

[19] Material cost of Tent 4M in 2009-10 = ₹409
Material cost of Tent 4M in 2010-11 = ₹39477
Increase = ₹39068
Percentage of increase = 39068 x 100/409 = 9552

8.4 Audit conclusion

The system of booking of expenditure merely on the basis of documents forwarded by the factory management without adequate checking by the Accounts Office led to irregular accounting of expenditure and unreliable cost data. Deficient pricing mechanism coupled with ineffective cost control led to recurring loss in issue of the products to the indentors every year, aggregating to ₹226.09 crore during 2008-12 as given in Table 34. This apart, abnormal variation in material and labour cost for common items produced in two factories resulted in extra financial burden of ₹105.47 crore in 16 instances.

Recommendation 16

Ministry may ensure that OEFG generate reliable cost data for enforcing strict cost control on the products.