Productivity and Efficiency Levels of the Enterprises in Visakhaptnam Special Economic Zone,

D.M. Sheaba Rani*

Introduction

The government of India introduced the Special Economic Zone (SEZ) scheme on 1-4-2000 in the country with a view to provide an international competitive and hassle free environment for exports. The scheme has been extended to the existing EPZs effective from 1-1-2003. A special economic zone is defined as a specifically delineated duty free enclave for trade operations. This area is reckoned as a foreign territory for the purpose of duties and tariffs. Units may be set up in SEZ for manufacture of goods and rendering of services. All the import/export operations of the SEZ units will be on self certification basis. The units in the zone have to be a net foreign exchange earner but they shall not be subjected to any pre-determined value addition or minimum export performance requirements. Sales in the Domestic Tariff Area by SEZ units shall be subject to payment of full Custom Duty and import policy in force. Further offshore banking units may be set up in the SEZs.

Objective of the Study

The main objective behind this research work is to find out the productivity and efficiency levels of the units in Visakhapatnam Special Economic Zone (VSEZ). The main purpose is to come out with those factors, which help to improve productivity and efficiency levels of the units.

Method of Investigation

Sample and procedure: The data used in this study was obtained from all 25 units in VSEZ who had more than two years of experience in their field. Questionnaire was prepared based on in corporating the following aspects.

(a) Machinery productivity
(b) Material productivity
(c) Employees productivity,
(d) Time management
(e) Transport facility.

The collected data was subject to suitable statistical analysis (percentages, weighted mean). Based on the analysis meaningful suggestions were given towards the end of this research work.

Analysis

(a) Machinery Productivity

Reasons for under utilization of installed capacity: Few respondents (5) revealed about under utilization of installed capacity. Majority of the respondents i.e. of 60% complained about the shortage of raw material, 40% of each is for the shortage of labour and finance, 20% of each is for the storage and marketing facilities. It can be concluded that if the respondents procure raw material timely they can increase their installed capacity (Table 1).

Table 1: Reasons for Under Utilization of Installed Capacity

Reasons for Under Utilization of Installed Capacity	*No. of Respondents*	*Percentage*
Shortage of Raw material	3	60
Shortage of Labour	2	40
Shortage of Finance	2	40
Storage	1	20
Marketing	1	20
Total	5	100

*Professor, Department of Commerce and Management Studies, Andhra University, Visakhapatnam, Andhra Pradesh.

Nature of machinery: With regard to this, 48% of the sample units purchased machinery from other countries, 36% have indigenous machinery and the remaining as partly indigenous machinery. Nearly 50% of the respondents are using imported machinery because this machinery produces good quality and high quantity of products. Moreover most of their products are exported to other countries and they have to compete with international standards (Table 2).

Table 2: Nature of Machinery

Nature of Machinery	*No. or Respondents*	*Percentage*
Indigenous	9	36
Imported	12	48
Partly indigenous	4	16
Total	25	100

Type of machinery used by the sample firms: Units using outdated and upgraded machinery give rise to increasing cost of production, wastage of man-days etc. 40% of the firms are using outdated/upgraded machinery and the remaining is using latest machinery. Hence it may be the main cause for frequent overhauling, wastage of man-days and under utilization of the capacity (Table 3).

Table 3: Type of Machinery Used by the Sample Firms

Usage of Machinery	*No. of Respondents*	*Percentage*
Outdated	1	4
Upgraded	9	36
Latest	13	52
Others	2	8
Total	25	100

Repairs and maintenance of the machinery: 72% of the sample units need maintenance for every 3 months and the remaining 28% need maintenance after 6 months. Frequent need for maintenance is a major cause for low productivity, high costs and under utilization of the capacity and it is a big constraint for their good performance (Table 4).

Table 4: Repairs and Maintenance of the Machinery

Repairs and Maintenance of Machinery	*No.of Respondents*	*Percentage*
Monthly	8	32
Bi-Monthly	4	16
Quarterly	6	24
Half yearly	3	12
Annually	2	8
One year and above	2	8
Total	25	100

(b) Material Productivity

Availability of raw material: Availability of raw material enhances the production and full utilization of the machinery capacity. 40% of the units got raw materials within the state, 20% within the district and 16% local and the remaining firms had to fetch raw materials from out of the state and also imported the raw materials. This type of availability of raw materials increases the cost of production and hence reduces the entrepreneur's returns (Table 5).

Table 5: Availability of Raw Material

Availability of Raw Material	*No. of Respondents*	*Percentage*
Locally available	4	16
Within the district	5	20
Within the state	10	40
Out of the state	6	24
Total	25	100

Reasons for deviations of materials consumption: Table 6 reveals that, by getting a majority of 99 points, working skills of the employees stood in the first place in the order, for the deviation of material productivity. For this the individual capacity is the main reason, which stood in the 2nd place in the order by acquiring 89 points from the respondents. For the deviation of productivity, the raw materials quality point stood in the 3rd place by acquiring 81 points on the weighted average scale from the respondents. The cause of work environment, for the deviation of material productivity occupies 4th place on scale, acquiring 61 points from the respondents opinion. Technology utilization plays a minimum role of 45 points in the productivity of materials in Visakhapatnam Special Economic Zone was noticed.

Table 6: Reasons of Deviation of Material Consumption

Reasons	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	T.W.P*	Rank
Individual capacity skill	8(40)	6(24)	5(15)	4(8)	2(2)	89	2
Working skill	10(50)	8(32)	4(12)	2(4)	1(1)	99	1
Quality of the raw material	4(20)	6(24)	9(20)	4(8)	2(2)	81	3
Work environment	2(10)	3(12)	5(15)	9(18)	6(6)	61	4
Technology	1(5)	2(8)	2(6)	6(12)	14(14)	45	5
Total	25	25	25	25	25	375	

(c) Employees Productivity

Selection criteria: Selection is basically a matching process. The purpose of selection is to pick up the most suitable candidate who could meet the requirements of the job. A large number of respondents representing about 76% selected their employees on merit basis and only 8% have selected the employees from reservation quota. This represents that firm's employees are very capable persons. And in order to achieve organizational goals, all units are giving prior preference to merit (Table 7).

Table 7: Selection Criteria

Selection Criteria	No. of Respondents	Percentage
Merti	19	76
Reservation quota	2	8
Sons of the soil	1	4
Other consideration	3	12
Total	25	100

Respondent's opinion on orientation/training: Training is the act of increasing the knowledge and skills of an employee for performing a particular job. The study reveals that 80%, i.e. 20 respondents are of the opinion that the firm's employees are given orientation/induction/training (Table 8).

Table 8: Respondents Openion of Orientation

Respondents Opinion on Orientation	No. of Respondents	Percentage
Yes	20	80
No	5	20
Total	25	100

Topics covered in orientation/training: Most of respondents have trained their employees on profile of unit and details of the department, 30% of them trained on details of the job duties and 20% about the career growth. Hence this is not a good sign to firms, because every employee should take minimum training on their job duties. If they are not properly trained they may produce inferior goods. It may be concluded that orientation/training programme is not properly organized and it need to cover all aspects of employment terms and conditions, social security benefits and career growth opportunities (Table 9).

Table 9: Topics Covered in Orientation/training

Topic Covered in Orientation/Training	No. of Respondents	Percentage
Profile of the unit	11	55
Details of the dept.	12	60
Details of the job duties	6	30
Career growth	4	20
Total	20	100

Training techniques: 15 respondents are maintaining training institutes in their organization and 10 respondents are not having any training institution to train their employees.

It is quite evident that, respondents have adopted seminars and business games occasionally and having relied on lecture method. None of the entrepreneurs chosen to train their employees by latest techniques like conducting of simulation exercise, syndication and in basket methods. The entrepreneurs should use the latest techniques to train the employees, which will be more beneficial to both the employees and to the organization (Table 10).

Table 10: Training Techniques

Training Techniques	*No. of Respondents*	*Percentage*
Lecture method	13	86.67
Case study	10	66.67
Group discussion	9	60.00
Seminar	7	46.67
Business games	3	20.00
Simulation exercise	—	—
Syndicate method	—	—
In-basket method	—	—
Total	15	100

Usefulness of training programmes: Respondents were asked to express their opinion on the usefulness of training helped to improve their employee's performance, after attending training programmes (Table 11). 40% of the respondents felt that it helped them to some extent only. Whereas 33.33% of them expressed that employees were benefited to a great extent and 26.67% felt that the training programmes are not at all useful to their employees.

Table 11: Usefulness of Training Programme

Training Programme	*No. of Respondents*	*Percentage*
A great extent	5	33.33
To some extent	6	40.00
Not at all	4	26.67
Total	15	100

Relevance of training programmes to the job content: 53.33% of the respondents mentioned that the contents of the training programmes are not relevant to the employee jobs. Therefore it clearly indicates that the themes of training programmes are not completely relevant to the contents of their employee's jobs. The above statement correlates with table 10, where only 6 respondents covered about details of the job duties in their orientation programmes (Table 12).

Table 12: Relevance of Training Programme to the Job Content

Training Programme	*No. of Respondents*	*Percentage*
Yes	5	33.33
No	8	53.33
Can't say	2	13.34
Total	15	100

(d) Time Management

Supply of goods in time: A majority of 72% of the respondents is supplying goods in time and only 28% of them are unable to supply goods in time on account of various reasons (Table 13).

Table 13: Supply of Goods in Time

Supply of Goods in Time	*No. of Respondents*	*Percentage*
Yes	18	72
No	7	28
Total	15	100

Reasons for timely supply of goods: Respondents are able to supply the goods in time because of timely availability of raw material 1st rank, employee efficiency 2nd rank, finance assistance 3rd rank, utilization of latest technology 4th rank, well-equipped machinery 5th rank. Out these reasons, timely availability of raw material is the main reason for the timely supply of goods (Table 14).

Table 14: Reasons for Timely Supply of Goods

Reasons	*Rank 1*	*Rank 2*	*Rank 3*	*Rank 4*	*Rank 5*	*T.W.P*	*Rank*
Time availability of raw material	6 (30)	5 (20)	4 (12)	2 (4)	1 (1)	67	1
Employees efficiency	4 (20)	5 (20)	4 (12)	4 (8)	1 (1)	61	2
Finance	3 (15)	3 (12)	5 (15)	3 (6)	4 (4)	52	3
Latest technology	3 (15)	2 (3)	4 (12)	6 (12)	3 (3)	50	4
Well equipped machinery	2 (10)	5 (12)	1 (3)	3 (6)	9 (9)	40	5

Reasons for not supplying goods in time: Respondents who accepts that units are unable to supply the goods in time, majority agrees that because of unavailability of raw material they are unable to manage the time

Minimum number of respondents reveals that utilization of the outdated machinery is not the main cause for not able to supply the goods in time (Table 15).

Table 15: Reasons for Not Supplying Goods in Time

Reasons	*Rank 1*	*Rank 2*	*Rank 3*	*Rank 4*	*Rank 5*	*T.W.P**	*Rank*
Unavailability of Raw Material	2 (10)	1 (4)	2 (6)	1 (2)	1 (1)	23	1
Employees inefficiency	2 (10)	1 (4)	1 (3)	2 (4)	1 (1)	22	2.5
Lack of Finance	1 (5)	2 (8)	2 (6)	1 (2)	1 (1)	22	2.5
Lack of Latest Technology	1 (5)	2 (8)	1 (3)	1 (2)	2 (2)	20	4
Out Dated machinery	1 (5)	1 (4)	1 (3)	2 (4)	2 (2)	18	5

*T.W.P = Total Weighted Points

(e) Transportation

Mode of transportation to export goods: Nearly 60% of the respondents are exporting their goods by seaway, 28% are using roadway, 8% of them using airway and 4% using railway. Hence it can be concluded that majority of them are using seaway because they have to export bulk quantities to other countries (table 16).

Table 16: Mode of Transportation to Export Goods

Mode of Transportation	*No. of Respondents*	*Percentage*
Seaway	15	60
Airway	2	8
Roadway	7	28
Railway	1	4
Total	25	100

Mode of transportation to import of raw material 36% and 32% of the respondents are using railway and roadway respectively. Only 2 respondents i.e. diamonds and gems respondents are using airway as means of transportation because they use less weight and costly raw materials (Table 17).

Table 17: Mode of Transportation to Import of Material

Mode of Transportation	*No. of Respondents*	*Percentage*
Seaway	6	24
Airway	2	8
Roadway	8	32
Railway	9	36
Total	25	100

Respondent's opinion on Transportation Facilities: About 52% of the respondents are satisfied with the available transport facilities. 36% and 12% of them expressed that the transport facilities are good and bad respectively. It can be concluded that a majority of 88% of the respondents are in favour of the transport facilities, available in VSEZ (Table 18).

Table 18: Respondents Opinion on Transport Facilities

Transport Facilities	*No. of Respondents*	*Percentage*
Good	9	36
Satisfactory	13	52
Bad	3	12
Total	25	100

Respondent's opinion on transport cost: Out of 25 respondents 11 respondents are satisfied with the transport cost. 8 respondents opined reasonable transport cost and 6 respondents felt bad about the transport costs (Table 19).

Table 19: Respondents Opinion on Transport Cost

Transport Cost	*No. of Respondents*	*Percentage*
Good	8	32
Satisfactory	11	44
Bad	6	24
Total	25	100

Suggestions

The important suggestions from the analysis are as follows.

1. If the respondents procure raw materials timely they can increase their installed capacity.
2. Entrepreneurs should use latest machinery to produce good quality and high quantity of products. Moreover, it may reduce frequent overhauling, wastage of man-days and under utilization of capacity.
3. Entrepreneurs should procure raw material at very cheaper rate to decrease the cost of production.
4. To uplift down trodden community entrepreneurs should follow some reservation quota in their selection criteria.
5. Entrepreneurs are advised to leave old and traditional techniques and use the latest techni-ques to train the employees, which will be more beneficial to both the employees and to the organization.
6. Training programmes are not properly organized and it needs to cover all aspects of employment terms and conditions, social security benefits and career growth opportunities etc.
7. Training institutions should play a crucial role because employees learned and trained for their job in this training institution.
8. Reasonable transportation cost reduces the cost of production and increase the entrepreneurs profit.

Reference

Foreign Trade Policy of India, Ministry of Commerce Industry, Government of India, New Delhi, 2004.