Class study

XYZ Ltd. is a manufacturing company engaged in the manufacturing of valves. They have been in the business for last 3 years and have been manufacturing only one type of valves. They started their business initially with sales of 10,000 valves per month and now they have grown the volume to about 50,000 valves per month. They have been buying all the raw material for the valve and were doing all the manufacturing in house. Now they have established themselves in the market and are planning to expand and produce different varieties of valves. They have their plant in the main city and the total area of the plant is 50,000 sq. ft. Now if they want to expand and continue doing all the activities of manufacturing of all the varieties in house, they would need another 50,000 sq.ft. of the area. In the recent times, the land prices in the area have more than doubled in the last 3 years and still land is available with great difficulty. Mr. Mukesh is the production head of ABC Ltd. and has been successful with the production and the level is continuously increasing. But in recent times, he is facing the problem of quality complaints which have gone up from average 0.2 % in previous 2 years to 0.5 % this year. Also, he is finding that there is a high level of dissatisfaction among the workers regarding workload as well as salary levels. The workers are regularly complaining about the over work.

Although, Mr. Mukesh has found that the workers have been spending lot of time on tea breaks, lunch breaks and even in between the production spending lot of time talking to each other. But, due to insufficient workers and staff, he is unable to take strict action and the workers are taking advantage of this situation. For completing the work and delivering the products timely, he has to employ workers on overtime and his overtime cost has also increased 3 times. Mr. Mukesh is worried about the new expansion plan of the management and is worried where the new workers would come from as he is already finding shortage of workers for the existing job. He has requested the management not to go for expansion immediately and look at improving and consolidating the existing set up. He has sent his request to *Mr. S. Kumar Director – Operations*.

Mr. Kumar has gone through the request of Mr. Mukesh and called a meeting of all the department heads and explained the situation to all concerned. The marketing manager has expressed very bullish prospect about the company's growth and said that the company should take advantage of growing economy and established brand image of the company and definitely go for expansion. The finance manger also expressed that this will result in economy of scale for the products and will further increase the profitability of the products. Mr. Mukesh again expressed his problems regarding availability of manpower as well as production control and effect on quality and productivity. The Marketing manager asked the Production manager about the option of outsourcing.

Mr. Mukesh is skeptical about the outsourcing option as he felt that the outside agency will always charge more as he will try to make his profit as well and also is worried about the possible problems of deliveries. Mr. Kumar asked the Mr. Naresh who is the Purchase manager about his views. He said that since the suppliers would also be interested in doing the business, they would not like to delay as with delay they also incur loss. The Finance manager said that we can look at cost comparison for buying against in house manufacturing.

After listening to all the views, Mr. Kumar told Mr. Mukesh to work out the cost of production for future sales as per the forecast given by the Marketing department. He also told Mr. Naresh to collect the details of the future requirements to get the purchase

cost details for few components of the valve. Mr. Mukesh and Mr. Naresh have collected their data and they have presented the data in the meeting called by Mr. Kumar to review the plan. First the marketing head Mr. Suresh presented his market forecast and then Mr. Mukesh presented his report and explained the details as follows.

One supervisor with monthly salary of Rs. 5000 with expected increase of 10 % per year. Direct wages of worker as Rs. 4 per unit. With 10 % reduction in second year, no change in 3rd year and increase of 10 % every subsequent year. Material cost of Rs. 14 per unit with an increase of 10 % every year. Power and fuel cost of Rs. 2 per unit with increase of 10 % every year. Indirect labor as 50 % of direct labor. They will have to buy a new machine with a cost of Rs. 50 lac. With usable life of 5 years

Mr. Naresh explained his details as follows:

Component price from supplier at Rs. 20 for the first 2 years with an increase of 10 % every subsequent year.

Transportation cost of Rs. 2 per unit for the first year with increase of Rs. 0.20 every subsequent year.

Inventory cost (storage cost) as 5 % per year of the basic material cost.

The Marketing manager has given the sales forecast for next 5 years as follows:

Year	1	2	3	4	5
Sales quantity	300000	500000	700000	900000	1000000

Questions

1. Based on this data, is it economical for XYZ Ltd.to go for buying the product from market or manufacturing in house.

2. What other factors should XYZ Ltd. look at for making this decision?