PGDM/PGDM-IB, 2021-23

Organizational, Financial and Sustainability Issues in Operations Management

DM-441/IB-441

Trimester – IV, End-Term Examination: September 2022

Instruction: This question paper consists of two sections, each comprising a case study. Please read the case studies and answer the questions that follow.

SECTION A

GOPAL COTTON MILLS LIMITED

Mr. Shah, the Managing Director of Gopal Cotton Mills, went to Japan on a trade mission. On his way back to India, he visited several Southeast Asian countries to make a survey of Indian Textiles. In the course of talking with many merchants and customers, he learned that they preferred Japanese products to Indian ones because of the former's faultless weave. Customers were not interested in buying Indian cloth which, being manufactured on non-automatic looms, contained frequent flaws. Mr. Shah decided, therefore, to introduce automatic looms in his mills.

Mr. Shah drew up a plan to build a new loom shed for automatic looms to replace the existing loom shed and old looms. The loom shed to be replaced was the smallest of the three in the company's compound. It had 100 looms running on two shifts. All the weavers working in this shed belonged to the same community and have been working in the shed for at least 10 years, some for as long as 25 years. Weavers from other sheds had no interaction with these weavers.

The old loom shed was hot, humid, poorly illuminated and very noisy. The machinery was old and a large number of breakdowns and accidents took place. But the workers were proud of the loom shed. They boasted that even with such old looms their production was higher than that of the other sheds with powerlooms. Each worker minded two looms and was paid according to his output. He had no helper to assist him. When he had to leave his looms running while he went to bring bobbins, carry cloth, go to the washroom, drink water, or talk with people, his neighbors would look after them. In fact, the workers took turns to go out for a break, and a group could always be found outside, away from the noise, talking, smoking and drinking water. Although the management was not in favor of this practice, all attempts to stop it had failed.

The supervisor made it a practice to make two rounds in the loom shed every day and to talk with any worker in difficulty. Several times each day he stood outside the door of the shed and chatted with workers who were coming in or going out. Many weavers consulted him about their personal problems.

The erection of the new loom shed was completed in one year. It had up-to-date lighting and humidification equipment, and comfortable washrooms and toilets inside the building. The machinery consisted of looms driven by separate motors and was spaced more generously than in the old shed. The plan specified one weaver to eight looms. Each weaver would have the assistance of a helper to take care of all the auxiliary work so that he would not have to leave the looms at all. The weavers were to be paid according to output. The helpers would be paid a fixed wage somewhat lower than the weaver's pay. All workers from the old shed were needed in the new shed, so the

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question of retrenchment did not arise. They would be either weavers or helpers. Those having the longest service with the company would be weavers. These points were covered by an agreement which Mr. Shah made with the labor union.

The work started in the new shed according to the plan. Within two months the shed had reached the target of 88% efficiency. At the same time the supervisor started realizing that lot of his time was taken up in listening to the complaints from the workers. The complaints were mostly about bad working conditions: that the walking distance between looms was too great, that the yarn breakage rate was too high for automatic looms, that the light was too glaring, that the toilet and drinking water place should not be in the same room, and so on. Production fell to 84 percent efficiency. The supervisor made it a practice to check the production of individual workers and to call to his office those whose production was the lowest. He asked them to explain the decline in production. In reply the workers stated more grievances.

One day, three representatives of the workers had gone to his office. They told him that the Mills were getting enormous profit from the automatic loom weaving, but that the workers were not getting a proper share of it. He replied that the company had spent a very large sum of money in installing the new shed and that it could not pay higher wages. The representatives left without argument. A week later the workers went on strike. When the supervisor arrived at the mill at 7 a.m., as usual, he found all the workers entering the old shed. The workers sat down on the empty floor, each where his loom had been and refused to move.

1. The behavior of the workers of the old loom shed, after the automatic looms with better working conditions were introduced, is paradoxical. Can you explain why they complain in spite of better working conditions?
   (CO 1; 10 marks)
2. Evaluate Mr. Shah's leadership. What would you do now, if you were in his shoes?
   (CO 1; 10 marks)

SECTION B

Read the case study 'Tire City, Inc.' and answer the following questions.

3. Using the financial statements of 1993, 1994, and 1995, can you evaluate the company's performance so far? Please use appropriate financial ratios.
   (CO 2; 10 marks)
4. Using the information in the case, prepare the income statements for 1996 and 1997.
   (CO 2; 10 marks)

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Tire City, Inc.

Jack Martin, Chief Financial Officer of Tire City, Inc., was preparing for a meeting with his company's bank later in the week. At that meeting, Mr. Martin intended to present a request that the bank grant Tire City a five-year loan to finance anticipated growth in the company and the expansion of the company's warehouse facilities.

In preparation for his meeting, Martin had gathered some recent financial statements for Tire City (see **Exhibit 1**).

Company Background

Tire City, Inc. (TCI) was a rapidly growing retail distributor of automotive tires in northeastern United States. Tires were sold through a chain of 10 shops located throughout eastern Massachusetts, southern New Hampshire and northern Connecticut. These stores kept sufficient inventory on hand to service immediate customer demand, but the bulk of Tire City's inventory was managed at a central warehouse outside Worcester, Massachusetts. Individual stores could be easily serviced by this warehouse, which could usually fill orders from individual stores within 24 hours.

For the year ended in December, 1995, TCI had sales of $23,505,000. Net income for that period was $1,190,000. During the previous three years, sales had grown at a compound annual rate in excess of 20%. This record was a reflection of Tire City's reputation for excellent service and competitive pricing, which yielded high levels of customer satisfaction.

Past Relationship With MidBank

In 1991, TCI had borrowed funds from MidBank to build a warehouse. This loan was being repaid in equal annual installments of $125,000. At the end of 1995, the balance due on the loan was $875,000. Also, in 1991 TCI established a line of credit at MidBank. The company had not yet borrowed any money under this credit arrangement.

Professor W. Carl Kester prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

The Current Financial Need

TCI had decided to expand its warehouse facilities to accommodate future growth. Indeed, the current warehouse facilities were practically bulging at the seams. During the next 18 months, TCI planned to invest $2,400,000 on its expansion, $2,000,000 of which would be spent during 1996 (no other capital expenditures were planned for 1996 and 1997). This expansion would fulfill the company's anticipated needs for several years. The warehouse construction project was expected to be completed in early 1997. Therefore, TCI would not be able to deduct any depreciation on the new building in 1996. However, Mr. Martin was told by his accountant that in 1997, Tire City could recognize a depreciation expense of 5% of the warehouse's total cost. The dollar value of TCI's depreciation expense on its other assets in 1996 and 1997 would be the same as it was in 1995.

The warehouse expansion project was designed so that disruption of the company's current operations would be minimized. However, management expected that by the end of 1996, TCI would temporarily have to decrease its inventories to a level of $1,625,000, significantly lower than the $2,190,000 shown on the balance sheet at the end of 1995. This cutback in inventories was expected to last only until the warehouse construction project was completed in early 1997. Mr. Martin had estimated that, by the end of 1997, inventory would rise back to the same proportional relationship to sales that it had in 1995.

Other than this temporary drop in inventory in 1996, the warehouse expansion was not expected to affect TCI's operations in any other material respects. Operating margins were expected to be consistent with recent past experience (the temporary drop in inventory would not affect cost of goods sold as a percent of sales, for example). Likewise, current accounts other than inventory were expected to maintain steady relationships to sales. Cash balances, for instance, would be maintained at a level of 3% of sales during the next two years. Although the Federal statutory marginal corporate tax rate was 35%, the average tax rate on TCI's pre-tax income had typically been higher than this due to miscellaneous local taxes. This higher overall level of taxation was expected to continue in the future at rates consistent with the most recent past experience. In view of this anticipated stability, Mr. Martin expected TCI's dividend payout policy to remain unchanged in the foreseeable future.

TCI had preliminary discussions with MidBank about borrowing money to finance the warehouse expansion and the growth of the business. The proposed terms of the financing called for taking down (i.e., borrowing) the loan in two separate parts on an as-needed basis: one in 1996 and one in 1997. The loan would be repaid in four equal annual installments. The first installment payment would take place one year after the construction of the warehouse was completed (i.e., in 1998). The interest rate was set at 10% per year.

Mr. Martin's Task

In preparation for his meeting, Mr. Martin intended to develop a set of pro forma financial statements for the company. He and his staff had projected a 20% increase in sales each year in 1996 and in 1997, from $23,505,000 to $28,206,000 and $33,847,000, respectively. Mr. Martin's first priority was to predict what the rest of the income statement and the balance sheet for the firm would look like at the end of 1996 and 1997.

Exhibit 1 Financial Statements for Tire City, Inc.

For years ending 12/31	1993	1994	1995
INCOME STATEMENT			
Net sales	$ 16,230	$ 20,355	$ 23,505
Cost of sales	9,430	11,898	13,612
Gross profit	6,800	8,457	9,893
Selling, general, and administrative expenses	5,195	6,352	7,471
Depreciation	160	180	213
Net interest expense	119	106	94
Pre-tax income	1,326	1,819	2,115
Income taxes	546	822	925
Net income	$ 780	$ 997	$ 1,190
Dividends	$ 155	$ 200	$ 240
BALANCE SHEET			
Assets			
Cash	$ 508	$ 609	$ 706
Accounts receivable	2,545	3,095	3,652
Inventories	1,630	1,838	2,190
Total current assets	4,683	5,542	6,548
Gross plant & equipment	3,232	3,795	4,163
Accumulated depreciation	1,335	1,515	1,728
Net plant & equipment	1,897	2,280	2,435
Total assets	$ 6,580	$ 7,822	$ 8,983
LIABILITIES			
Current maturities of long-term debt	$ 125	$ 125	$ 125
Accounts payable	1,042	1,325	1,440
Accrued expenses	1,145	1,432	1,653
Total current liabilities	2,312	2,882	3,218
Long-term debt	1,000	875	750
Common stock	1,135	1,135	1,135
Retained earnings	2,133	2,930	3,880
Total shareholders' equity	3,268	4,065	5,015
Total liabilities	$ 6,580	$ 7,822	$ 8,983