ACCT 701-102 Analysis for Management Accounting and Decision Making

Case Study:

Precision Worldwide, Incorporation

Dinia Gepte, 300818574

Josue Reta, 300821572

Julio Ruiz, 300814140

Pamela Silva, 300820758

Centennial College

Professor Geoffrey Prince

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Case Summary

Precision Worldwide, Inc. is an industrial machine and equipment manufacturer that has a wide clientele worldwide. With a head office in the United States, the company has branches and factories around the globe including its German branch which is the focus of this case study. Its general branch manager, Hans Thorborg, is presented with new information that affects the company's foothold and future profits in the replacement parts sector.

The case talks about the emergence of a French competitor that introduced a product that can substitute for a replacement part that Precision Worldwide manufactures. The competitor's product is superior in every way in terms of properties and operational cost, which leads Thorborg and his team to assess and analyze the situation.

Issues for Consideration

We have identified the issues that Thorborg is faced with that require careful consideration to make an appropriate managerial decision and action.

Excess Inventory of Steel Rings and Raw Materials

The German branch holds a large quantity of steel rings and special steel in its inventory with a value of about $390,000. As a distinctive raw material, the special steel cannot be used to manufacture anything else or sold elsewhere. The factory will incur a $110,900 cost to manufacture the special steel into 34,500 steel rings.

Cost to Manufacture

In terms of manufacturing cost of plastic rings and steel rings, there is a big difference between the two with plastic rings being much cheaper than steel rings. This is due to material, labour, and administrative costs of plastic rings being many times below steel rings. Producing a hundred plastic rings costs $279.65 versus $1,107.90 for steel rings. A batch of plastic rings is

almost four times lower the price of the traditional steel rings. Moreover, the report shows that plastic rings have a longer life cycle than steel rings.

Opportunity Cost of Not Manufacturing Plastic Rings

Opportunity costs are fundamental to a company's decision making. Analyzing the benefits of a resource and comparing it to its closest alternative is extremely important to identify possible profits and to compute cash outlays of a project. The managers of PWI were not convinced on whether the company should or should not produce the new plastic rings. Considering that the cost to manufacture the new product is significantly lower than the steel rings and that the selling price for both goods are practically the same, choosing not to would be ignoring its opportunity cost. In other words, opting not to produce the plastic rings because of the excess in inventory of steel rings is losing the opportunity to increase their profit margin, as the less it costs to have a final product while maintaining the equivalent selling price, the higher the financial results are. Nonetheless, the biggest challenge to put the project into practice is reorganizing the facility structure to accommodate the new process.

Implications and Challenges

The company must adjust its strategy based on the market trend and the challenge competitors and new entrants pose. Thorborg and his team need to decide their response to a new market product. The company must stay on top of the product engineering to hold its position in the market. By proactively approaching and leading the market, the company should be able to minimize losses. In this case, if the company is able to reduce the product cost by new technology or partnership with suppliers, the company will not incur the risk of 10% market share loss, as stated in the article. The company should focus on relevant cost which impacts a decision making process (Atkinson, Kaplan, Matsumara, & Young, 2012). The

company should try to minimize the cost of carrying such inventory as well as focus on the strategy of launching a new product. Once their product is launched, if PWI sells plastic rings only in France, where their main competitor's market is, and sell steel rings elsewhere until customers learn about the new product, it can help the company in the short run but harm it in the long run.

Excess Inventory of Steel Rings and Raw Materials

Hans Thorborg needs to take into account the sunk cost of the steel ring and how to have an effective production of the plastic ring. Sunk costs are costs in decision making that have already been paid. Since they have already been incurred, they shouldn't even be taken into consideration. In this case, the special steel materials shouldn't even be taken into account (Atkinson, Kaplan, Matsumara, & Young, 2012). Another aspect that will influence Thorborg`s decision is that the company, after selling the remaining steel ring inventory, will still have over 15,000 units when the date of plastic rings roll out.

Cost to Manufacture

The lower manufacturing cost of plastic ring will significantly reduce the steel ring supply. Companies who do not follow the market trend will eventually encounter serious problems in their business. Meanwhile, Thorborg's team need to evaluate whether current manufacturing facilities can meet plastic ring manufacturing standard, and whether new investment is needed in order to fulfill the manufacturing process. If new facilities are needed, how long will it take for the factory to set-up the new facilities and what is the return on investment?

Opportunity Cost of Not Manufacturing Plastic Rings

When analyzing the opportunity cost for this case, it is clear that the most beneficial decision is to produce the new plastic rings. However, in order to do so, the company might face a reasonable challenge: restructuring the manufacture operations. Such change is arduous and risky as it includes reorganizing the whole modus operandi of the factory.

Updating or even changing the machineries could have a high cost. Training the staff for a new production and selling process takes time and money. Finding new suppliers that are reliable and meet the quality and prices requirements is not an easy task and the tests period could take longer than expected. All these plus the urge for the sales launch are the biggest implications for PWI.

Recommendation

Excess Inventory of Steel Rings and Raw Materials

Our recommendation for Precision Worldwide, Inc. is to immediately stop the production of steel rings. PWI then needs to sell the remaining steel rings to at least recoup some of their initial investment. In the meantime, they should start producing, selling, and distributing plastic rings to their entire market of customers, while attracting new customers who may prefer this new option. By switching to selling plastic rings, PWI will generate more profit which will keep them ahead of competitors in the industry. The remaining steel rings will have to be calculated as a sunk cost. With this new product offering, PWI will be able to acquire new clientele across the globe and still be able to maintain the loyalty of their existing patrons.

Cost to Manufacture

Adding the opportunity cost to produce steel rings (cost to manufacture plastic rings) and the already completed steel rings (zero), we are faced with a final opportunity-cost issue. That is, will customers pay for steel rings given that they have a two-month life and plastic rings have at

least an eight-month life? If customers are willing to pay as much for plastic rings as to steel rings, then even if we assume that our steel rings have a cost of zero, we are better off selling plastic rings because our contribution per month is higher for plastic rings than for steel rings.

Opportunity Cost of Not Manufacturing Plastic Rings

The production process of the current product will have to be revised to accommodate the new output, which is the greatest implication of opting for the plastic rings. Factors like the facility layout, labour training, raw material suppliers. and machinery adjustments need special attention and a careful analysis, as the wrong decision will directly affect the costs and the item's final price and, consequently, the success of the business. Therefore, the wisest thing to do is to create a Re-engineering Plan including all the factors cited.

Conclusion

The best option for PWI is to sell the steel rings at a reduced cost due to their less longevity compared to plastic rings. Manufacture and sell steel rings until all steel stock is exhausted, then sell only plastic rings. Thorborg should instruct his development engineer to begin the process to enable the company to manufacture the plastic rings. He should continue to manufacture and sell steel rings until plastic rings are available. When the plastic rings become available, he should instruct his sales manager, Gerhard Henk, to sell the plastic rings only in the jeopardized markets and to push the steel rings, at a reduced cost, in all other markets. All customers should be notified of the new plastic rings and be given the choice of plastic or steel. During the slack manufacturing period with a reduced labour rate, Hans should instruct the factory to concentrate on manufacturing steel rings to generate a surplus of steel rings then concentrate on manufacturing plastic rings during the peak season.

Manufacturing and selling of the steel rings should be continuously monitored. If a point in time arrives that steel ring sales are faltering, then production of steel rings should cease and all remaining steel be scrapped. This should be enough justification for Patrick Corrigan, the parent company spokesman, who suggested that all remaining steel stock be used up. Eventually, the company will only sell plastic rings only but Thorborg should take advantage of the lower labour cost during the off season and sell as much of the inventory steel as possible.

References

Atkinson, A., Kaplan, R., Matsumara, E., & Young, S. (2012). Management Accounting: Information for Decision-Making and Strategy Execution (6th ed.). In *Using Costs in Decision Making* (p. 74-76). New Jersey: Pearson Education, Inc.