DETERMINING PRICING AND LOT-SIZING POLICIES UNDER PROMOTIONAL EXPENSE FOR SOME VEBLEN PRODUCTS

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by

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CONCLUSIONS AND SCOPE FOR FUTURE WORK

6.1 Conclusions

The focus of the research in this thesis has been on the determination of optimal sales price, lot-size and promotional expenses in the case of Veblen products. For this reason, the conspicuous consumption has been studied in detail and the related available literature has been explored for finding research gaps. No researcher was found to use the Veblen curves for determining right pricing and lot-sizing policies for luxury products. An attempt has been made to fill this gap through the present research work. For this purpose, the Veblen curves showing the price-demand relationships suggested by Leibenstein (1950) have been considered. The models have been proposed to determine optimal pricing and lot-sizing policies with or without promotional expenses. The model helps to determine the right amount of expense on the promotion of products. Sensitivity analyses were conducted by considering possible variations in the price-demand curve by extending the curves' tails on low price side or high price side or both. Sensitivity analyses were also conducted with respect to problem parameters. Effect of promotional expense on optimal lot-size and sales price was also studied for the cases of the niche and mass markets. Going further to capture the reality existing in the present-day business, the demand was taken to be dependent on price as well as on promotional expense. For solving the mathematical models, two algorithms, i.e., GA and TLBO, were developed and their performance analysis was conducted. The conclusions, derived from the present studies undertaken, are summarised as follows.

▪ The analyses carried out shows that the optimal sales price of the product will always fall on those parts of the demand curve where law of demand is operative. In view of this, it is suggested to work with only these parts of the demand curve in order to

determine optimal inventory and pricing policies. The optimal sales price is always more than the price at which the demand is locally maximum.

▪ Optimal pricing on the lower sales price side of the demand curve can be encountered for those luxury products that are consumed by middle-class people, who have bulk demand with high price-sensitivity. For rich people, it is expected to occur on the high sales price side of the price-demand curve.

▪ From sensitivity analysis of various variations in the demand curves, it has been observed that the profit curve may or may not follow the pattern of the demand curve.

▪ One can earn an additional profit by incurring expenses on product promotion. Additional profit can be earned without influencing demand and by promoting the product in such a way that increases its perceived value and thus increase in the sales price.

▪ In the niche market, the perceived value can be enhanced with small promotional investment to yield high profit. In the case of the mass market, it requires a huge advertisement budget in order to penetrate the market. So, the increase in profit percentage is lower in the case of the mass market than the niche market.

▪ In the case where demand is considered as the function of both price and advertisement expense, it has been observed that revenue and profit both increased due to product promotion. The product promotion did not influence the perceived value much but the demand. In this case, the percentage increase in profit was lower compared to the percentage increase in demand and revenue. This was due to the heavy advertisement budget needed to enhance the demand without a significant increase in the sales price.

▪ Sensitivity analyses carried out show that the optimal order quantity and cycle time change with the change in the value of holding cost rate, ordering cost and unit cost price. The change in the holding cost rate or the ordering cost does not impact the

pricing or promotional decisions and the demand practically remains stationary. However, the change in the unit cost impacts the annual demand and also the pricing and promotional decisions.

- Holding cost rate, ordering cost and the unit cost, all the three parameters play important role in deciding inventory policies for Veblen products.

- The two heuristic approaches were also proposed. Results obtained from LINGO software and TLBO approach were found to be the same. The CPU time taken by the TLBO was much more than that for LINGO and GA.

6.2 Scope for Future Work

Since no researcher in the past has attempted the mathematical modelling of Veblen products for pricing and lot-sizing even for a retailer, there is a scope to devise optimal policies for sellers in different conditions and environment. Some of the scopes for future work are detailed below.

- The present work can be extended to an integrated model where supplier, manufacturer and retailer work altogether to determine their pricing and inventory policies.

- This work considered the case of a single product. The present work can be extended to develop policies for pricing and lot-sizing for multi-product.

- Further, this research can be extended to develop a model to study a scenario where price discount is provided by the retailer.

- The nature of price-demand curve for the Griffin products is similar to the Veblen curve, so the present research can be extended to develop inventory policies for such products.