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Product Inventory and Increase in Demand:A study of Indian Industries

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ABSTRACT

This paper attempts to explain whether finished product inventory has a positive impact on demand function. The finished product inventory affects the demand function through different motives for holding finished product inventory. These motives are increase in demand motive, reduction in demand uncertainty motive, entry deterrent motive, and speculative motive. For this, a theoretical model is developed and is tested for the Indian industries at the firm level. The empirical results show that in case of firms belonging to consumer non durable group, producer non-durable group and producer durable group of industries, finished product inventory has a positive impact on the demand function whereas in case of firms belonging to consumer durable group, no clear cut trend is visible indicating effective inventory management policy in some firms and the unintended accumulation of inventory in some other firms.

1. INTRODUCTION

HOLDING of product inventory is one of the basic features of almost all the firms in the modern industrial world. One of the main aims of a firm to hold product inventory is to stablise its demand curve. A large inventory may provide assurance to the customers that desired supply will be available whenever they demand the product. The firm will have a good reputation among its customers. The customers will feel that the firm is a reliable supplier and this will increase the goodwill of the firm. According to Spulber (1985) the firm faces financial risk due to the cost of unsatisfied consumer demand resulting from insufficient inventory. Thus by holding sufficient amount of inventory, the firm can keep its consumer happy. Langlois (1989) has argued that demand for the product is positively affected by the product availability and this motivates the firm to hold inventory. According to Rossana (1984) the firm's expected inflow of orders depends on the stock of inventory that it holds. Thus, the possibility of holding of product inventory may result in a favourable valuation of the firm's product by the consumers. In other words, by holding sufficient amount of inventory, the firm can shift the demand curve of its product to the right. This can be clearly understood with the help of the following diagram.

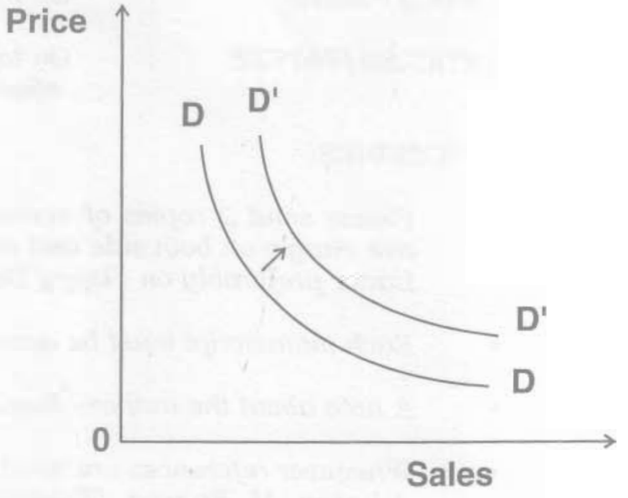

Figure 1.

In Figure 1, DD is the initial demand curve of the firm's product when the firm does not hold any inventory. when the firm starts holding inventory, more consumers are attracted toward the firm's product because they feel confident of desired supply of the product being available and this shifts the demand curve to the right, that is to D'D'.

Randomness in the demand curve of a firm is another motivating factor for holding of product inventory. Randomness in the demand curve can impose large fluctuations in the production level and consequent cost of adjustment. Even under these conditions the firm generally finds it worthwhile to reduce cost by smoothing out production and adopting an approing impact on the price as they want to reduce the excess investment in finished product inventory by reducing the price.

Producer Non-Durable Group of Industries:

Under this group, a sample of five firms has been taken. The results show that in case of three firms the impact of finished product inventory on demand function is positive while in case of two firms it is negative. This means that finished product inventory is not valued positively from the users side in some firms while in case of other firms the user responds positively to availability of the product. The main reason for not having any clear relationship is that producer non-durable products are generally raw materials (or intermediate in nature) and are transformed into a new product by its users. If its users use the superior quality of the product, they will be having a great demand for their product in the market. Thus, the users of producer non-durable products will try to use the superior quality of the product and the firms which are supplying the superior quality of the product can shift its demand curve to the right by holding finished product inventory.

Producer Durable Group of Industries:

For all the firms taken in the sample, the regression model has performed quiet well. The coefficient of finished product inventory is found to be positive in case of two firms and negative in case of the remaining two firms. There is variation from firm to firm and thus, no clear cut trend is visible in this industry group. This implies an effective inventory management policy in some firms and converse in some other firms from the demand point of view.

6. CONCLUSION

One of the main aims of a firm to hold finished product inventory is to shift the demand curve of its product to the right. That is, demand for the product is positively affected by the product availability and this motivates the firms to hold inventory. Other motives of holding inventory are to reduce the randomness in the demand curve, to deter the entry of new firms and to enjoy speculation in the market. All these motives affect the demand function and thus finished product inventory affects the demand function. The empirical results show that in case of firms belonging to consumer non-durable group, the impact of finished product inventory on the demand function is positive indicating that consumers respond to availability of the product. On the other hand, in case of firms belonging to consumer durable group, producer non-durable group and producer durable group of industries, no clear cut trend is visible. This implies an effective inventory management policy in some and reverse in some other firms.

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