International Journal of Production Research ›
Volume 57, 2019 - Issue 4

Articles

Optimal inventory decisions when offering layaway

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Pages 1161-1175 | Received 08 Jun 2017, Accepted 12 Jul 2018, Published online: 25 Sep 2018

Cite this article https://doi.org/10.1080/00207543.2018.1502484 Check for updates

Abstract

This paper presents an inventory management policy for a retailer offering a layaway programme. Layaway is a service provided by retailers that allows budget constrained consumers who have sufficiently high valuations to pay for a product in several instalments rather than at once and obtain the product that has been reserved for them at the end of the payment period. If a consumer defaults on payments, then the reserved item is released back into store inventory. In this paper, we first determine the retailer's optimal order decisions when layaway is offered. We find that the order quantity under a layaway programme decreases with the likelihood of consumers not finishing their layaway plans and that it is not always profitable for a retailer to offer a layaway programme. We then identify the market conditions under which the retailer would benefit from a layaway programme. Lastly, we consider an extension to capture the influence of the timing of consumer defaults.

Keywords:

layaway inventory management consumer behaviour order quantity profit maximisation

Disclosure statement

No potential conflict of interest was reported by the authors.

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Additional information

Funding

This work was supported by Natural Sciences and Engineering Research Council of Canada.

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