

Positive effect of aging: the case of wine

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Abstract

This paper examines the positive aspects of aging- Optimal pricing, production, and consumption of product that contain the process of positive aging. Some items, such as valuable and rare stamps, old coins, works of art, and antiques, become more expensive over time. More popular examples demonstrating the positive effect of aging that influences price are the aging of boutique wine and artisan cheese. The present paper examines the wine aging process that brings about quality

improvement. This process also leads to determining (i) optimal aging periods for different wines; (ii) optimal grape juice inventory allocations and prices for different wines; (iii) optimal quantities of different kinds of wine; and (iv) the time durations of wine production and consumption from each vintage. These aspects are considered through a mathematical model in an environment in which the demand increases over time due to the aging and rarity of the product. One result reveals the possibility that an increase in the aging process by exogenous “shock” such as technological or logistic improvements may under certain conditions lead to profit reduction.

Keywords wine aging, production duration, consumption duration, quality improvement, rarity of the product