Pricing Based on Price Elasticity Theory and iQ-Sports

Two Qualex Pricing Policy Initiatives

Qualex has developed two separate initiatives for aiding managers in setting prices: a ticket revenue management initiative and a pricing algorithm.

Ticket Revenue Management or Dynamic Pricing

This project is modeled after the MIT work first applied to airline seat pricing and later applied to hotel pricing, cruise ship pricing, and elsewhere. The tool is offered in SAS with an R offering to appear spring 2014.

In it, prices for the same tier of seats are broken into classes with different offering price per class. A history of sales by tier and by price class is needed.

Price Line	Section	Class	Price
a	J	1	$300
a	J	2	$250
a	J	3	$225
b	J	1	$275
b	J	2	$225
b	J	3	$200

Results:

Seats to Sell for Section J, a 2100 Seat Section

	Price Line a	Price Line b	Price Line c
Class 1	511	570	600
Class 2	339	380	500
Class 3	1250	1150	1000
Total Seats in Section	2100	2100	2100

Pricing Based on Price Elasticity

Setting the right price is an important goal for every commercial organization. Set too low and you lose revenue due to margins not being as high as the market will support. Set too high and you lose revenue due to customers balking at the price. Price elasticity theory finds the single optimal price that is neither too low nor too high when price to units sold exhibits an expected downward slope. The Qualex tool does this by looking at historical sales by price tier and calculating the optimal price. Qualex has developed this tool against its iQ-Sports data. The tool is developed in R for ease of installation

This second project is based on economic price elasticity theory. Here we again examine a history of sales and develop a price based on the calculated elasticity of demand over the history. This is especially suited for pricing goods. The data should have, for each stock keeping unit (SKU), price and quantity pairings for many pairings.

iQSports Data

The following is a subset of our IQSports data residing on HANA.

SOURCE_DESCRIPTION	TICKET_TYPE	SEAT_NUMBER	PLAN_TYPE	PRICE_TO_USE_MIN
…	…	…	…	…
Ticket Sales - Team 1	Single Game	18	N	$ 158.81
Ticket Sales - Team 1	Single Game	20	N	$ 1,470.58
Ticket Sales - Team 1	Single Game	21	N	$ 83.95
Ticket Sales - Team 1	Single Game	22	N	$ 4,705.88
Ticket Sales - Team 1	Single Game	23	N	$ 115.29
Ticket Sales - Team 1	Single Game	24	N	$ 85.87

These data have been used when developing the two tools described above.

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