# Ticket pack promotion for portland trail blazers assignment 

Business, Marketing

## ASSIGN BUSTER

Context The Trail Blazers was a monopoly on the professional sports market in Portland. Now the Trail Blazers is in a very bad time. Its home arena was taken over by creditors, its performance was in danger of being the worst in NBA history, and attendance numbers was falling (Case, Page 1). Its Management tried to promote by developing multigame ticket packages. Conjoint analysis technique is used to design the survey and analyze the result. According to the situation, we assume that the new promotion program needs to increase the attendance numbers and profit. Question 1 To judge which attribute indicate is the overall most important in the purchase decision, we calculated the importance of each attribute according to the utility score data (Case, Table 1). The results are shown in Decision Weight Assignment (Appendix, Table 1). The most important attribute is ticket location, which can decide 39. $4 \%$ of the total utility. The second is ticket price with 37. 7\% decision weight. Number of games and promotional item is relatively less important. Number of games has $11.8 \%$ decision weight, and promotional item has 11. 1\% decision weight. Question 4

The total attribute combinations are $3 * 4 * 4 * 5=240$, which are shown in Appendix Table 2. Because " the Blazers were unwilling to allow certain price and seating combinations no matter how well received they were" (Case, Page 5), the combinations including 200-level seats for less than $\$ 60$ and 300-level midcourt seats for less than $\$ 25$ can be removed from total combinations. The remaining attribute combinations are $240-3 * 1 * 5-3 * 3 * 5=$ 180. According to the cost structure (Case, Table $2 \&$ Table 3) and our
assumptions, the Trail Blazers should avoid loss, thus 27 packages which cause loss need to be removed.

The remaining packages are $180-27=153$, which are shown in Appendix Table 3. The utility gap between the package with the greatest utility and the package with the 21 st greatest utility is 0.53 , which occupies $17 \%$ of total utility (3. 12, which is adjusted according the analysis in previous paragraph). We think analyzing them is enough to make a decision. By analyzing the top 20 popular packages (Appendix Table 5), we find out the following results (Appendix Table 4): 60\% of packages include 6 games, which is managements' favorite (Case, Page 6).

But 10-game packages seem not very attractive due to the low appearance rate $5 \%$. Seats and price show strongly relativity. $70 \%$ of the packages have 300-level seat in midcourt and ticket price $\$ 25$ or $\$ 35$, which strongly suggests us to design packages like these. But $20 \%$ of packages have 300 level seat in other places and $\$ 15$ price, which means some customers prefer bad seats with low price; and $10 \%$ of packages have 200 -level seat in midcourt and $\$ 60$ price, which means some customers can afford high price for good seats.

This information is valuable, because it help us design packages with seats which are not very popular. 75\% of packages have low-value promotional items, which supports our conclusion about the importance of promotional items in question 1. The top 4 popular packages have much greater utility than others. All of them have seats in 300-level midcourt, so seats in 300-
level midcourt should be main stream of the packages. 2 of them have $\$ 25$ price, which have 0.04917 more utility than other 2 packages with $\$ 35$ price, but the profit is $\$ 10$ less.

Considering profit, we suggest to design the price based on $\$ 35$. If we use hot dog instead of priority, the utility increased by 0.04917 . If we assume that there is a linear relation between price and utility in the range between $\$ 35$ and $\$ 60$, we can increase the price by $(0.04917 / 1.66909) *(60-35)=\$ 0$. 74 and keep the utility unchanged, but our cost for hot dog is $\$ 3.25$. Thus the profit decreased. The same conclusion is for other promotional items. In our conclusion, it is better to let customers purchase promotional items except priority by themselves.

Considering all factors, we suggest that the core package has $\$ 35$ price, 6 games, 300-level seat in midcourt and priority for home playoff tickets. It has good profit, relatively greater utility, and increases potential future attendance numbers. Moreover, to satisfy diversity customers, two other packages can be considered as supplement. The package with 6 games, $\$ 15$ price, 300-level seat behind the baskets and priority for home playoff tickets help sell unpopular seats with 0.29371 utility and $\$ 5$ profit.

Also, the package with 6 games, $\$ 60$ price, 200 -level seat in midcourt and priority for home playoff tickets help get more profit (\$20) with 0.37785 utility. Appendix Table 1: Decision Weight Assignment | Minimum| Maximum| Gap| Percentage| Ticket location| -0. 73169| 1. 01148| 1. 74317| 39. 4\%|

Ticket price| $-1.00257|0.65646| 1.66903|37.7 \%|$ Number of games| -0.

2764| 0. 24383| $0.52023|11.8 \%|$ Promotional item| $-0.31786|0.17428| 0$. 49214| 11. 1\%| Total| || 4. 42457| 100. 0\%| Table 2: All packages https://docs. google. com/spreadsheet/ccc? ey= 0An4XCgbePOfdE4xeGdJZIVqaEFlaV84dkhGM2d5TWc; hl= en_US Table 3: All packages restricted by seat cost and profit https://docs. google. com/spreadsheet/ccc? key $=0 A n 4 X C g b e P O-f d H d a M G I 2 S I N V W G U x Y n A 4 Z V A 5 R 09 H Z O E ; ~ h l=~ e n \_U S ~$ Table 3: All packages restricted by seat cost and profit | Games| Seats| Price| Promotional item| Option| 3| 6| 10| $300 \mathrm{mc}|200 \mathrm{mc}| 300$ others| \$25, \$35| \$15| \$60| cheap| expensive| Number| 7| 12| 1| 14| 2| 4| 14| 4| 2| 15| 5 | Percent| 35\%| 60\%| 5\%| 70\%| 10\%| 20\%| 70\%| 20\%| 10\%| 75\%| 25\%| Table 5: Top 20 most popular packages

When the attribute appears in the package, its value is 1 ; otherwise, its value is 0 . The package utility can be calculated as ( 0.03257 )*(3-game) $+(0$. $24383) *(6-$ game $)+(-0.2764) *(10-$ game $)+(0.65646) *(\$ 15)+(0.22011) *(\$ 25)$ $+(0.126) *(\$ 35)+(-1.00257) *(\$ 60)+(-0.73169) *(300$ behind $)+(-0$. 43716)*(300 corner) $+(0.15736)^{*}(300$ midcourt $)+(1.01148) *(200$ midcourt) $+(0.12511) *($ priority $)+(0.17428) *($ hot dog $)+(0.00158) *($ apparel $)$ $+(-0.31786) *$ (collectible)+(0.01689)*(gift). The package profit can be calculated as $(15) *(\$ 15)+(25) *(\$ 25)+(35) *(\$ 35)+(60) *(\$ 60)-$ (10)*(300behind)-(12)*(300corner)

