Company X | Wow-cher Case study

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Wow-cher Efficacy| Funnel

Assumptions

1. Analysis done only for the month of July

2.To establish a baseline for customers who responded to a survey related to a delay, we are assuming the case with a single pair of event_id and survey_id.

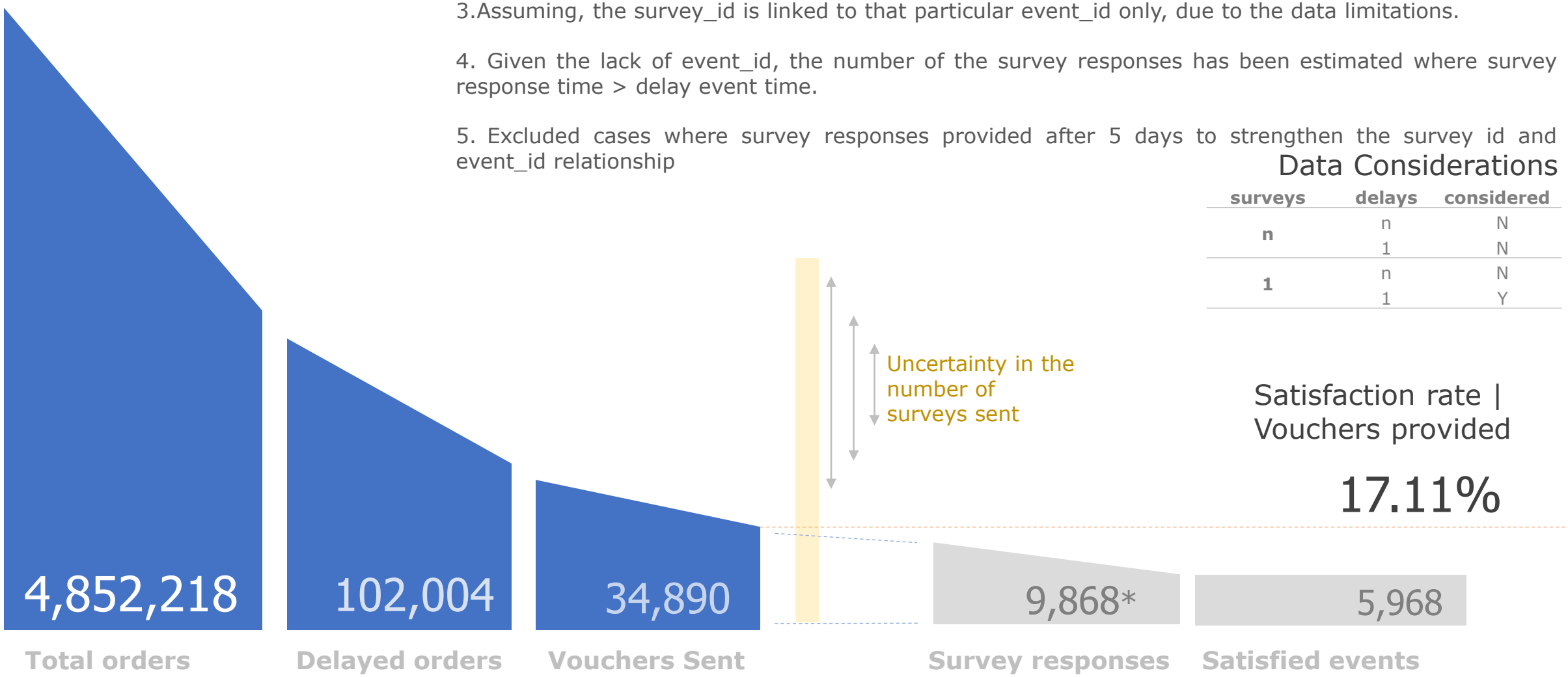
3.Assuming, the survey_id is linked to that particular event_id only, due to the data limitations.

4. Given the lack of event_id, the number of the survey responses has been estimated where survey response time > delay event time.

5. Excluded cases where survey responses provided after 5 days to strengthen the survey id and event_id relationship

Data Considerations

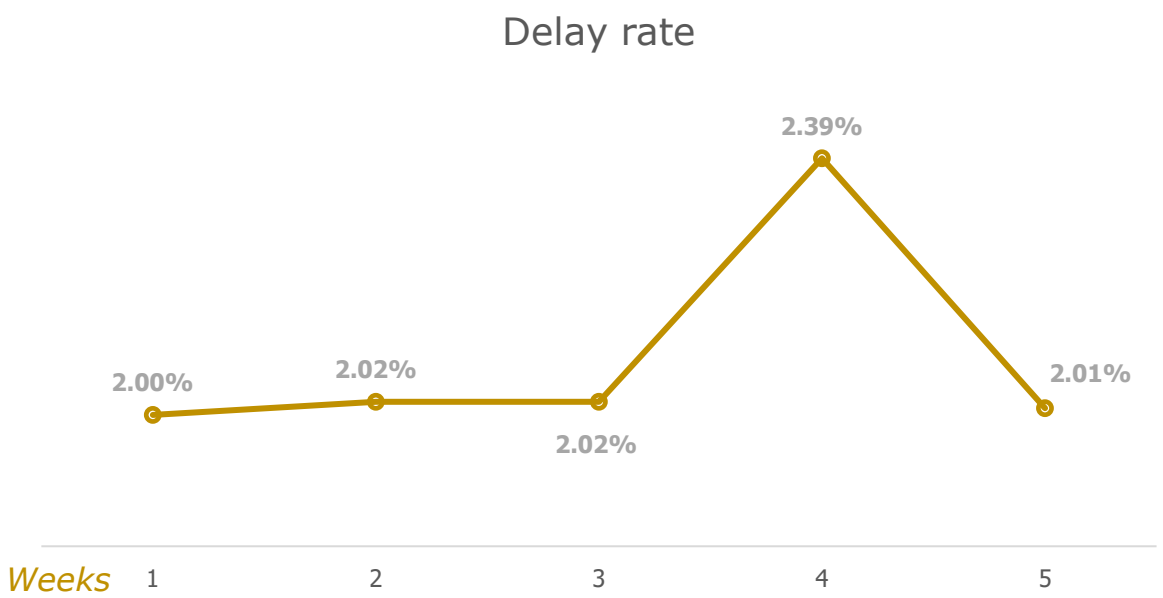
surveys	delays	considered
n	n	N
	1	N
1	n	N
	1	Y

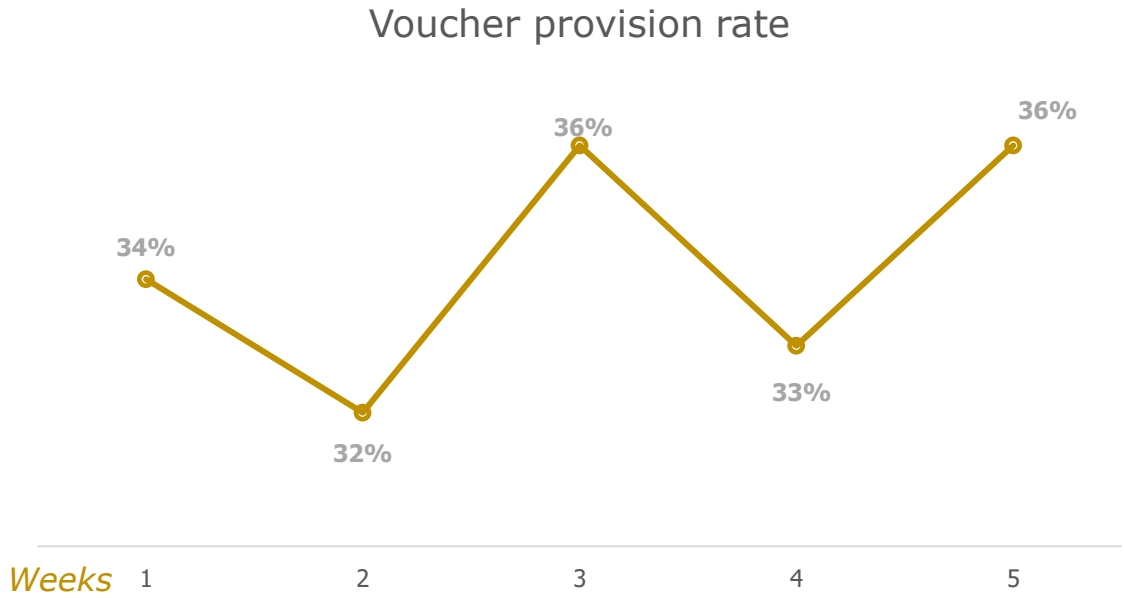


Satisfaction rate | Vouchers provided

17.11%

Product Health | Monitoring Metrics





$$Delay\ Rate = \frac{Delayed\ Events}{Total\ Orders}$$

$$Voucher\ Provision\ Rate = \frac{Vouchers\ Provided}{Total\ Delays}$$

***Additional metrics to be monitored (Given more data)**

Survey response rate = Surveys responded / Surveys sent

Satisfaction rate = Satisfied count / Surveys responded | Satisfied count / Vouchers provided

Satisfaction Improved? | Control group analysis

Cohort A | No voucher
Cohort B | With voucher

Groups	*Satisfaction%*
Proportion A	54.27%
Proportion B	60.48%

$$Z - statistic = \frac{P_B - P_A}{\sqrt{P_A(1 - P_B)/n}}$$

P_A : *Proportion of Cohort A*
P_B : *Proportion of Cohort B*
n : *Sample size of Cohort B*

$\boldsymbol{Z - score : 12.379}$
$\boldsymbol{Critical\ value : 1.645}$

$\boldsymbol{Z - score > Critical\ value}$

	Survey Rating	*No. of Events*	*%*
Vouchers Provided	0	3,900	39.5%
	1	5,968	60.5%
	Total	9,868	100.0%

	Survey Rating	*No. of Events*	*%*
No Vouchers	0	8,980	45.7%
	1	10,657	54.3%
	Total	19,637	100.0%

Difference is statistically significant indicating that the vouchers improve satisfaction.

Explore | Country

Voucher	*Survey Rating*	*Bangladesh*	*Malaysia*	*Pakistan*	*Taiwan*	*Thailand*	*Total*	*Average*	*STDEV*	*Low*	*High*
Voucher Provided	0	40.2%	39.5%	38.8%	39.8%	39.6%	39.5%	39.6%	0.5%	39.1%	40.1%
	1	59.8%	60.5%	61.2%	60.2%	60.4%	***60.5%***	60.4%	0.5%	***59.9%***	***60.9%***
No Voucher	0	56.7%	46.7%	50.0%	40.5%	42.7%	45.7%	47.3%	6.4%	40.9%	53.7%
	1	43.3%	53.3%	50.0%	59.5%	57.3%	***54.3%***	52.7%	6.4%	***46.3%***	***59.1%***

- The satisfaction rate in the action group across all countries is greater than the control group
- The satisfaction rates across all countries in the action group are clustered more around the mean when compared to the control group
- Hence, we can conclude that the Wow-cher is providing consistent results across countries when compared to the control group, except in Taiwan
- In Taiwan, we can make some tweaks to the criteria in Wow-cher to improve the customer satisfaction.

Explore | customer_value_index

Voucher	*Survey Rating*	*1*	*2*	*3*	*4*	*Total*
Voucher Provided	0	46%	34%	36%	32%	39.0%
	1	54%	66%	64%	68%	***61.0%***
No Voucher	0	55%	37%	33%	33%	43.9%
	1	45%	63%	67%	67%	***56.1%***

- The wow-cher product is more effective for customers with lower customer value index and it gradually becomes less effective as we go higher in the customer value index
- Group with customer value index 3 has a different behavior, need to do an RCA to understand this better
- We can maintain a higher percent of voucher allocation to the group with lower customer value index when compared to the higher index to incentivize future orders
- Assumptions: as same as the first funnel, additionally removed customers with -1 index