The New Zoomzoom Scooter is now available for sales exclusive through its website. Sales are looking good, but suddenly, preorders of Bat Scooter started drop after couple of weeks. What is going on? As a data analyst, I will figure this out.

POST HOC ANALYSIS

Sales Drop And Performance Of Email Marketing Campaign

Ngoc Quy – Data Analyst

POST HOC ANALYSIS: SALES DROP AND PERFORMANCE OF EMAIL MARKETING CAMPAIGN

SALES DROP AND PERFORMANCE OF EMAIL MARKETING CAMPAIGN

I. INTRODUCTION

The New Zoomzoom Scooter is now available for sales exclusive through its website. Sales are looking good, but suddenly, preorders of BAT scooter started drop after couple of weeks. What is going on? As a data, I will figure this out.

II. OVERVIEW & TIMELINE

Depending on CRISP – DM and business Analytic, I following the scientific method to solve the problem.

1. Define the question to answer – what cause the drop in sales of the Bat Scooter after few weeks.
2. Business Understanding and Data Understanding – what element can affect sales drop and what data we have.
3. Construct a Hypothesis to explain the event or answer the question
4. Define and execute an objective experiment to test the hypothesis.
5. Analyze the data that was collected during the experiment
6. Report the result of the analysis.

In this case, Post Hoc Analysis – I'll used some statistical analysis with the help of PostgreSQL and Excel. And this dataset was processed so we don't need cleansing. To simplify report, we don't dive into about database, attributes, flow, Business Function Model.

Data (11 table) with more than 1 million rows

```
postgres=# \c sqlda
You are now connected to database "sqlda" as user "postgres".
sqlda=# \dt
                 List of relations
 Schema |            Name             | Type  |  Owner
--------+-----------------------------+-------+----------
 public | countries                   | table | postgres
 public | customer_sales              | table | postgres
 public | customer_survey             | table | postgres
 public | customers                   | table | postgres
 public | dealerships                 | table | postgres
 public | emails                      | table | postgres
 public | products                    | table | postgres
 public | public_transportation_by_zip | table | postgres
 public | sales                       | table | postgres
 public | salespeople                 | table | postgres
 public | top_cities_data             | table | postgres
(11 rows)
```

Products for information of products

Sales for sales transaction

Emails for email marketing

1.1 DEFINE THE QUESTION TO ANSWER

- What is Bat scooter?
- When is start and Quantifying the sales drops?
- How does the Bat Scooter compare with other types of scooter?
- What causes the drop in sales of the BAT Scooter after few weeks? – what elements can affect to the drop of sales in this case? – Maybe Price, Launch Date or Marketing

What is Bat Scooter? – Basic information (production_date: 07/06/2019 – base_msrp: 599.99)

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	product_id bigint	model text	year bigint	product_type text	base_msrp numeric	production_start_date timestamp without time zone	production_end_date timestamp without time zone
1	1	Lemon	2013	scooter	399.99	2012-10-28 00:00:00	2015-02-03 00:00:00
2	2	Lemon Limited Edition	2014	scooter	799.99	2013-08-30 00:00:00	2013-11-24 00:00:00
3	3	Lemon	2016	scooter	499.99	2015-12-27 00:00:00	2021-08-24 00:00:00
4	5	Blade	2017	scooter	699.99	2017-02-17 00:00:00	2017-09-23 00:00:00
5	7	Bat	2019	scooter	599.99	2019-06-07 00:00:00	[null]
6	8	Bat Limited Edition	2020	scooter	699.99	2019-10-13 00:00:00	[null]
7	12	Lemon Zester	2022	scooter	349.99	2021-10-01 00:00:00	[null]

1.2 QUANTIFYING THE SALES DROPS?
- Extract the sales information – 7328 transactions (07/06/2019 – 25/01/2022)

	customer_id bigint	product_id bigint	sales_transaction_date timestamp without time zone	sales_amount double precision	channel text	dealership_id double precision
1	4319	7	2019-06-07 00:41:57	599.99	internet	[null]
2	40250	7	2019-06-07 02:47:28	599.99	dealership	4
3	35497	7	2019-06-07 04:21:08	599.99	dealership	2
4	4553	7	2019-06-07 07:42:59	599.99	dealership	11
5	11678	7	2019-06-07 09:21:08	599.99	internet	[null]
6	45868	7	2019-06-07 10:29:29	599.99	internet	[null]
7	24125	7	2019-06-07 18:57:25	599.99	dealership	1
8	31307	7	2019-06-07 21:22:38	599.99	internet	[null]
9	42213	7	2019-06-07 21:27:36	599.99	internet	[null]
10	47790	7	2019-06-08 01:28:58	599.99	dealership	20
11	6342	7	2019-06-08 03:04:57	599.99	internet	[null]
12	45880	7	2019-06-08 04:09:19	599.99	dealership	7
13	43477	7	2019-06-08 05:24:50	599.99	internet	[null]
14	6322	7	2019-06-08 08:48:07	599.99	internet	[null]
15	46653	7	2019-06-08 15:47:01	599.99	dealership	6
16	9045	7	2019-06-09 00:15:20	599.99	dealership	19
17	23679	7	2019-06-09 00:17:53	539.991	internet	[null]

Total rows: 1000 of 7328   Query complete 00:00:00.121

- Sales volume after 7 days compare to previous week in 30 days.

	sales_date date	daily_sales bigint	total_sales numeric	lag numeric	vol numeric
1	2019-06-07	9	9	[null]	[null]
2	2019-06-08	6	15	[null]	[null]
3	2019-06-09	10	25	[null]	[null]
4	2019-06-10	10	35	[null]	[null]
5	2019-06-11	5	40	[null]	[null]
6	2019-06-12	10	50	[null]	[null]
7	2019-06-13	14	64	[null]	[null]
8	2019-06-14	9	73	9	7.1111111111111111
9	2019-06-15	11	84	15	4.6000000000000000
10	2019-06-16	12	96	25	2.8400000000000000
11	2019-06-17	10	106	35	2.0285714285714286
12	2019-06-18	6	112	40	1.8000000000000000
13	2019-06-19	2	114	50	1.2800000000000000
14	2019-06-20	5	119	64	0.85937500000000000000
15	2019-06-21	6	125	73	0.71232876712328767123
16	2019-06-22	9	134	84	0.59523809523809523810
17	2019-06-23	2	136	96	0.41666666666666666667
18	2019-06-24	4	140	106	0.32075471698113207547
19	2019-06-25	7	147	112	0.31250000000000000000
20	2019-06-26	5	152	114	0.33333333333333333333
21	2019-06-27	5	157	119	0.31932773109243697479
22	2019-06-28	3	160	125	0.28000000000000000000
23	2019-06-29	10	170	134	0.26865671641791044776
24	2019-06-30	4	174	136	0.27941176470588235294
25	2019-07-01	7	181	140	0.29285714285714285714
26	2019-07-02	15	196	147	0.33333333333333333333
27	2019-07-03	1	197	152	0.29605263157894736842
28	2019-07-04	10	207	157	0.31847133757961783439
29	2019-07-05	4	211	160	0.31875000000000000000
30	2019-07-06	9	220	170	0.29411764705882352941

III. LAUNCH TIMING ANALYSIS – SA`LE DROP BY LAUNCH DATE

Bat Scooter Launch Date is June or Q2 – only this model Bat in this month and this Quarter. Almost other model for Q4. In this situation, we can compare with same model in a different location or region, but with different time launching. However, not in this case, so I choose to similar scooter – Bat Limited Edition. Following preceding methods.

- Basic information Bat Limited Edition – (production_date:13/10/2019 – base_msrp: 699.99)

|	product_id bigint	model text	year bigint	product_type text	base_msrp numeric	production_start_date timestamp without time zone	production_end_date timestamp without time zone
1	1	Lemon	2013	scooter	399.99	2012-10-28 00:00:00	2015-02-03 00:00:00
2	2	Lemon Limited Edition	2014	scooter	799.99	2013-08-30 00:00:00	2013-11-24 00:00:00
3	3	Lemon	2016	scooter	499.99	2015-12-27 00:00:00	2021-08-24 00:00:00
4	5	Blade	2017	scooter	699.99	2017-02-17 00:00:00	2017-09-23 00:00:00
5	7	Bat	2019	scooter	599.99	2019-06-07 00:00:00	[null]
6	8	Bat Limited Edition	2020	scooter	699.99	2019-10-13 00:00:00	[null]
7	12	Lemon Zester	2022	scooter	349.99	2021-10-01 00:00:00	[null]

- Extract sales transaction – 5803 transactions (13/10/2019 - 25/01/2022)

	customer_id bigint	product_id bigint	sales_transaction_date timestamp without time zone	sales_amount double precision	channel text	dealership_id double precision
21	43732	8	2019-10-18 14:08:35	699.99	dealership	2
22	22001	8	2019-10-18 18:25:11	699.99	internet	[null]
23	23660	8	2019-10-18 21:36:33	699.99	dealership	2
24	6516	8	2019-10-18 22:26:43	699.99	internet	[null]
25	2311	8	2019-10-19 03:23:13	699.99	dealership	13
26	42940	8	2019-10-19 10:48:16	559.9920000000001	internet	[null]
27	36167	8	2019-10-19 14:04:03	559.9920000000001	dealership	7
28	24481	8	2019-10-19 15:39:11	699.99	dealership	17
29	30924	8	2019-10-19 21:11:06	699.99	internet	[null]
30	24235	8	2019-10-20 07:19:46	629.991	internet	[null]
31	25346	8	2019-10-20 11:19:00	629.991	internet	[null]
32	4452	8	2019-10-20 14:13:47	699.99	dealership	1

Total rows: 1000 of 5803   Query complete 00:00:00.112

- Sales volume after 7 days compare to previous week in 30 days.

	sales_date date	daily_sales bigint	total_sales numeric	delays numeric	vol numeric
1	2019-10-13	6	6	[null]	[null]
2	2019-10-14	2	8	[null]	[null]
3	2019-10-15	1	9	[null]	[null]
4	2019-10-16	4	13	[null]	[null]
5	2019-10-17	5	18	[null]	[null]
6	2019-10-18	6	24	[null]	[null]
7	2019-10-19	5	29	[null]	[null]
8	2019-10-20	4	33	6	4.5000000000000000
9	2019-10-21	6	39	8	3.8750000000000000
10	2019-10-22	2	41	9	3.5555555555555556
11	2019-10-23	2	43	13	2.3076923076923077
12	2019-10-24	2	45	18	1.5000000000000000
13	2019-10-25	4	49	24	1.0416666666666667
14	2019-10-26	4	53	29	0.82758620689655172414
15	2019-10-27	5	58	33	0.75757575757575757576
16	2019-10-28	1	59	39	0.51282051282051282051
17	2019-10-29	3	62	41	0.51219512195121951220
18	2019-10-30	8	70	43	0.62790697674418604651
19	2019-10-31	4	74	45	0.64444444444444444444
20	2019-11-01	7	81	49	0.65306122448979591837
21	2019-11-02	7	88	53	0.66037735849056603774
22	2019-11-03	8	96	58	0.65517241379310344828
23	2019-11-04	3	99	59	0.67796610169491525424
24	2019-11-05	7	106	62	0.70967741935483870968
25	2019-11-06	4	110	70	0.57142857142857142857
26	2019-11-07	9	119	74	0.60810810810810810811
27	2019-11-08	3	122	81	0.50617283950617283951
28	2019-11-09	6	128	88	0.45454545454545454545
29	2019-11-10	3	131	96	0.36458333333333333333
30	2019-11-11	2	133	99	0.34343434343434343434
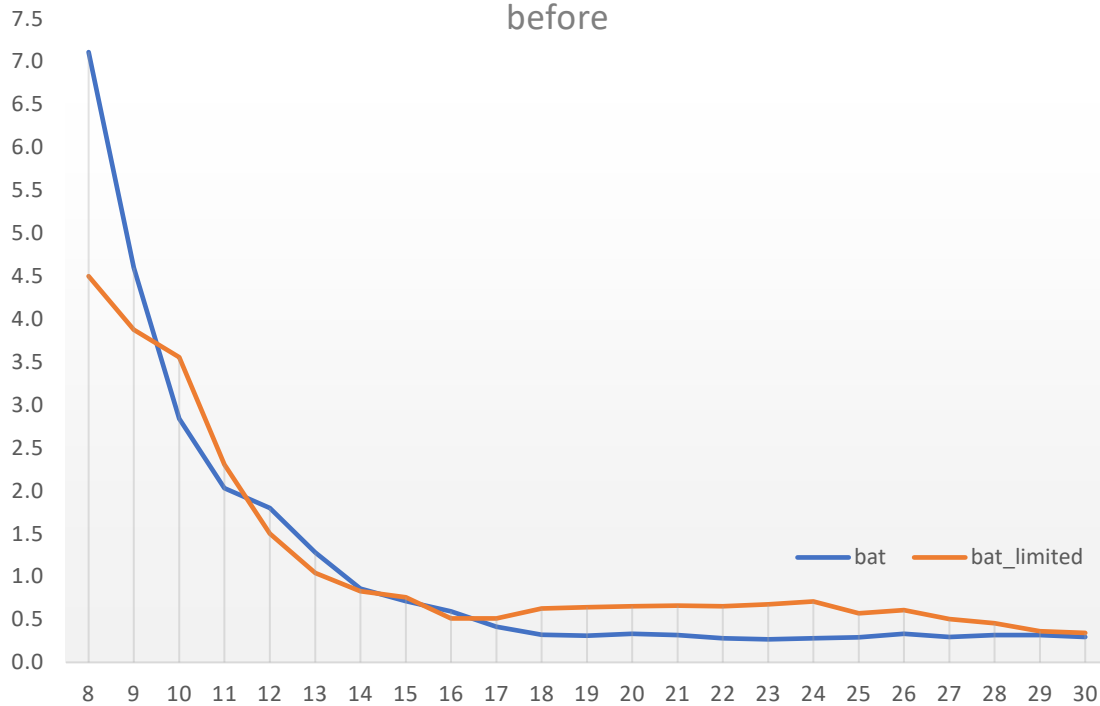
From the data, after 30 days the sales growth is 34% for Bat Limited Edition Scooter and 29% for Bat Scooter compare to previous week. We can see the growth of within first week of Bat Scooter more than Bat Limited Edition Scooter, but sales growth of the Bat Limited Edition more sustained over a long period. (Median for Bat Limited Edition Scooter is 0.66 and 0.33 for Bat Scooter). Moreover, after 18 days The Bat Scooter just only have 32% compare to previous week and go to 29% in 30 days. Meanwhile, The Bat Limited Edition still have 63% and more, until get 34% in 30 days. We can consider the impact of Launch Date. However, because two Scooter weren't the same, and with two price categories: $699.99 and above or $599.99 and below. Perhaps the reduction can be attributed to the different pricing models or Email Marketing Campaign.

IV. PRICE ANALYSIS – WHETHER THE PRICE CAN MAKE REDUCE IN SALES?

	product_id bigint	model text	year bigint	product_type text	base_msrp numeric	production_start_date timestamp without time zone	production_end_date timestamp without time zone
1	12	Lemon Zester	2022	scooter	349.99	2021-10-01 00:00:00	[null]
2	1	Lemon	2013	scooter	399.99	2012-10-28 00:00:00	2015-02-03 00:00:00
3	3	Lemon	2016	scooter	499.99	2015-12-27 00:00:00	2021-08-24 00:00:00
4	7	Bat	2019	scooter	599.99	2019-06-07 00:00:00	[null]
5	5	Blade	2017	scooter	699.99	2017-02-17 00:00:00	2017-09-23 00:00:00
6	8	Bat Limited Edition	2020	scooter	699.99	2019-10-13 00:00:00	[null]
7	2	Lemon Limited Edition	2014	scooter	799.99	2013-08-30 00:00:00	2013-11-24 00:00:00

In seven models, I'll choose another scooter with lower price and Q3 to test hypothesis – Lemon 2016.

Following preceding methods

Basic information: Lemon 2016 (production date: 27/12/2015 – 24/08/2021, base_msrp: $499.99)

Extract sales transaction – 16558 transactions (27/12/2015 – 23/08/2021)

	customer_id bigint	product_id bigint	sales_transaction_date timestamp without time zone	sales_amount double precision	channel text	dealership_id double precision
1	4154	3	2015-12-27 04:58:43	399.992	internet	[null]
2	30612	3	2015-12-27 09:02:25	499.99	internet	[null]
3	20862	3	2015-12-27 16:57:29	499.99	internet	[null]
4	54	3	2015-12-27 19:01:51	399.992	internet	[null]
5	10861	3	2015-12-27 20:40:00	449.99100000000004	internet	[null]
6	30731	3	2015-12-27 23:38:44	399.992	internet	[null]
7	447	3	2015-12-28 04:27:28	499.99	internet	[null]
8	10801	3	2015-12-28 08:07:53	499.99	internet	[null]
9	29731	3	2015-12-28 11:20:59	449.99100000000004	internet	[null]
10	2542	3	2015-12-28 12:21:21	499.99	internet	[null]

Total rows: 1000 of 16558   Query complete 00:00:00.103

Sales volume after 7 days compare to previous week in 30 days.

	sales_date date	daily_sales bigint	total_sales numeric	delays numeric	vol numeric
1	2015-12-27	6	6	[null]	[null]
2	2015-12-28	8	14	[null]	[null]
3	2015-12-29	4	18	[null]	[null]
4	2015-12-30	9	27	[null]	[null]
5	2015-12-31	9	36	[null]	[null]
6	2016-01-01	6	42	[null]	[null]
7	2016-01-02	8	50	[null]	[null]
8	2016-01-03	6	56	6	8.3333333333333333
9	2016-01-04	6	62	14	3.4285714285714286
10	2016-01-05	9	71	18	2.9444444444444444
11	2016-01-06	3	74	27	1.7407407407407407
12	2016-01-07	4	78	36	1.1666666666666667
13	2016-01-08	7	85	42	1.0238095238095238
14	2016-01-09	3	88	50	0.76000000000000000000
15	2016-01-10	3	91	56	0.62500000000000000000
16	2016-01-11	4	95	62	0.53225806451612903226
17	2016-01-12	6	101	71	0.42253521126760563380
18	2016-01-13	9	110	74	0.48648648648648648649
19	2016-01-14	6	116	78	0.48717948717948717949
20	2016-01-15	6	122	85	0.43529411764705882353
21	2016-01-16	11	133	88	0.51136363636363636364
22	2016-01-17	8	141	91	0.54945054945054945055
23	2016-01-18	4	145	95	0.52631578947368421053
24	2016-01-19	5	150	101	0.48514851485148514851
25	2016-01-20	4	154	110	0.40000000000000000000
26	2016-01-21	9	163	116	0.40517241379310344828
27	2016-01-22	7	170	122	0.39344262295081967213
28	2016-01-23	8	178	133	0.33834586466165413534
29	2016-01-24	4	182	141	0.29078014184397163121
30	2016-01-25	8	190	145	0.31034482758620689655

Ngoc Quy – Data Analyst
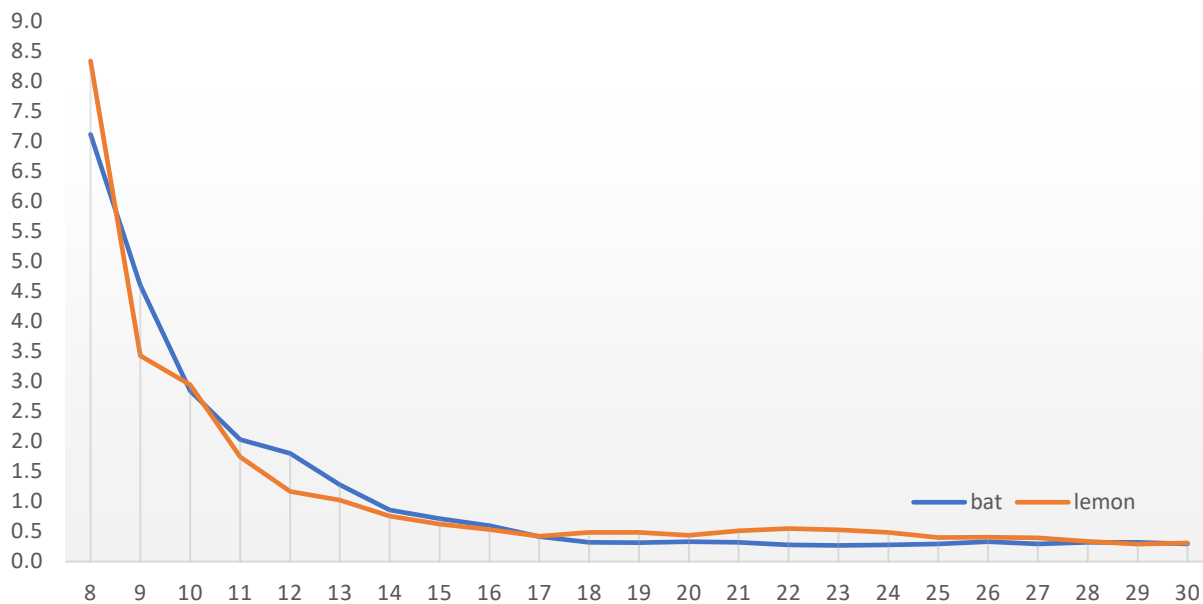
Now we have collected data of three type scooter to test two hypotheses of timing and cost, what observation can we make and what conclusions can we draw. The first we looking into the volume lemon, over cycle 5.7 year, sold 16558. While Bat and Bat Limited Edition sold 7328 and 5803 units in 2.7 years sales data and Bat limited less than approximately 4 months. Besides, the growth of three types. We can make some observation:

• The Bat scooter, which launched in October at a price 599.99$, experience at 700% sales growth in first week and 28% after first 22 days with 160 unit.

• The Bat limited scooter, which launched in February at price 699.99$, experience at 450%. growth in first week and 65% after 22 days with 96.

• The Lemon scooter, which launched May at price 499.99$, experience at 833% growth in first week and 54% after 22 days with 141.

Conclusion:

The growth rate starting in the second week correlated with the price 499.99 for 833% and 599.99$ for 700%. As the cost increased to 699.99$, the sales growth dropped from 833% to 450%.
• The number of units sold in first 22 day does not directly to the prices. The units sold of Bat scooter more than lemon scooter despite the price difference.

Ngoc Quy – Data Analyst

V. ANALYZING THE PERFORMANCE OF THE EMAIL CAMPAIGN BY OPENING RATE AND SENT RATE

Data 418158 rows, 15 kind of emails subject:

	email_id bigint	customer_id bigint	email_subject text	opened text	clicked text	bounced text	sent_date timestamp without time zone
1	175138	575	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
2	175484	1074	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
3	177740	4229	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
4	177826	4359	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
5	180518	8197	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
6	285737	3802	Black Friday. Green Cars.	f	f	f	2020-07-21 15:00:00
7	289032	7759	Black Friday. Green Cars.	f	f	f	2020-07-21 15:00:00
8	290506	9566	Black Friday. Green Cars.	f	f	f	2020-07-21 15:00:00
9	294066	13851	Black Friday. Green Cars.	f	f	f	2020-07-21 15:00:00

Total rows: 1000 of 418158   Query complete 00:00:00.340

	email_subject text
1	25% off all EVs. It's a Christmas Miracle!
2	A Brand New Scooter...and Car
3	A New Year, And Some New EVs
4	An Electric Car for a New Age
5	Black Friday. Green Cars.
6	Introducing A Limited Edition
7	Like a Bat out of Heaven
8	Save the Planet with some Holiday Savings.
9	Shocking Holiday Savings On Electric Scooters
10	The 2013 Lemon Scooter is Here

Total rows: 15 of 15   Query complete 00:00:00.

Extract emails from customer who was purchased The Bat Scooter or The Bat Scooter Limited Edition Lemon 2016. With some condition:

- Email sent before production date.
- Sales date before email sent date.
- Between email sent date and purchase date no more than 30 days.
- Filter only relevant subject emails.

The Bat Scooter (40190 rows)

	email_id bigint	customer_id bigint	email_subject text	opened text	clicked text	bounced text	sent_date timestamp without time zone
1	180518	8197	Like a Bat out of Heaven	f	f	f	2019-05-19 15:00:00
2	317333	41956	Black Friday. Green Cars.	f	f	f	2020-07-21 15:00:00
3	23	287	Introducing A Limited Edition	t	f	f	2013-08-30 15:00:00
4	26	315	Introducing A Limited Edition	f	f	f	2013-08-30 15:00:00
5	72	845	Introducing A Limited Edition	f	f	f	2013-08-30 15:00:00
6	82	1311	Introducing A Limited Edition	f	f	f	2013-08-30 15:00:00
7	91	1056	Introducing A Limited Edition	f	f	f	2013-08-30 15:00:00
8	117	1355	Introducing A Limited Edition	f	f	f	2013-08-30 15:00:00
9	123	1444	Introducing A Limited Edition	t	f	f	2013-08-30 15:00:00

Total rows: 1000 of 40190   Query complete 00:00:00.183   Ln 36, Col

After filter (320 rows – 315 customer was received email in 6659 customer who purchased Bat Scooter - 84 emails opened)

	email_id bigint	customer_id bigint	email_subject text	opened text	sent_date timestamp without time zone	sales_date timestamp without time zone
1	245966	196	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-20 19:50:16
2	246054	319	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-26 04:46:09
3	246262	600	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-15 08:15:27
4	247024	1616	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-10-03 03:16:55
5	247029	1621	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-26 14:14:32
6	247103	1721	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-25 09:40:31
7	247803	2666	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-10-03 08:38:31
8	248401	3455	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-21 08:17:59
9	248508	3592	We Really Outdid Ourselves this Year	t	2019-09-12 15:00:00	2019-10-08 20:39:20

Total rows: 320 of 320   Query complete 00:00:00.083   Ln 123, Col 1

The Bat Limited Scooter Data (130284 rows)

	email_id bigint	customer_id bigint	email_subject text	opened text	sent_date timestamp without time zone	sale_date timestamp without time zone
1	177826	4359	Like a Bat out of Heaven	f	2019-05-19 15:00:00	2017-01-30 04:04:19
2	177826	4359	Like a Bat out of Heaven	f	2019-05-19 15:00:00	2017-11-06 08:12:40
3	180518	8197	Like a Bat out of Heaven	f	2019-05-19 15:00:00	2018-09-06 21:18:44
4	285737	3802	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2019-01-08 09:55:52
5	289032	7759	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2018-12-27 03:40:59
6	309869	32921	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2019-12-14 16:36:11
7	313514	37337	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2021-06-21 17:35:00
8	320371	45652	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2018-01-30 23:20:22
9	322975	48781	Black Friday. Green Cars.	f	2020-07-21 15:00:00	2018-10-05 06:01:11

Total rows: 1000 of 130284   Query complete 00:00:00.168   Ln 88, Col 1

After Filter (329 rows – 326 customer was received email in 13854 customer who purchased Lemon Scooter - 80 emails opened)

	email_id bigint 🔒	customer_id bigint 🔒	email_subject text 🔒	opened text 🔒	sent_date timestamp without time zone 🔒	sales_date timestamp without time zone
1	245867	73	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-24 13:19:29
2	245952	180	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-25 12:43:08
3	246023	274	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-13 02:48:59
4	246064	332	We Really Outdid Ourselves this Year	t	2019-09-12 15:00:00	2019-09-15 11:32:06
5	246104	384	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-25 10:31:32
6	246345	708	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-09-18 11:20:34
7	246448	856	We Really Outdid Ourselves this Year	t	2019-09-12 15:00:00	2019-09-24 13:11:51
8	246647	1117	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-10-04 06:41:52
9	246792	1314	We Really Outdid Ourselves this Year	f	2019-09-12 15:00:00	2019-10-07 02:58:15

Total rows: 329 of 329　　Query complete 00:00:00.105　　　　　　　　　　Ln 118, Col 55

Conclusion:

The Bat Scooter:

315 customer was received email in 6659 customer who purchased Bat Scooter – 4,7% customer purchased The Bat Scooter received email.

In 84/320 emails opened– 26% customer opened email and make purchased.

The Lemon Scooter:

326 customer was received email in 13854 customer who purchased Lemon Scooter – 2,3% customers purchased The Lemon Scooter received email.

In 80/326 emails opened – 25% customer opened email and make purchased.

VI. SUMMARY RESULT:

Launch Time and Price Analysis:

➢ The growth rate starting in the second week correlated with the price $499.99 for 833% and 599.99 for 700%. As the cost increased to 699.99$, the sales growth dropped from 833% to 450%.
➢ The number of units sold in first 22 day does not directly to the prices. The units sold of Bat scooter more than lemon scooter despite the price difference.
➢ The is some proofs to suggest that the reduction in sales can be attributed by to seasonal variations and the fact only Bat launched in October. Well, but before we draw conclusion time launching, prices can impact to sales performance, we must test some other possibilities like marketing work, such as email campaigns.

Email Opening Rate and Sent Rate:

➢ There's a correlation and evidence between unit sold of scooter and emails marketing campaigns.
➢ Only 2.3 – 4.7% potential customers received email for Lemon and Bat Scooter, but 25 – 26% customer opened emails made purchased. We can increase the sent rate emails to get boost up the sales performance from opening emails rate.

Ngoc Quy – Data Analyst