Channel Portfolio Analysis

Optimizing marketing channels is all about bidding efficiently and using data to maximize the effectiveness of your marketing budget.

Common Use Cases Include

- Understanding which channels are driving the most sessions and orders through your website.
- Understanding differences in user characteristics and conversion performance across your various marketing channels.
- Optimizing bids and allocating your marketing spend across a multi-channel portfolio so the company can achieve maximum performance.

Marketing Channels Trend Analysis | SQL

```sql
-- A second search channel was introduced
-- on August 22, 2012 non brand bsearch
-- weekly trended session volume of bsearch
-- and comparing it with gsearch non brand
SELECT
    WEEK(W.created_at) AS week,
    MIN(DATE(W.created_at)) AS week_start_date,
    COUNT(DISTINCT W.website_session_id) AS sessions,
    COUNT(DISTINCT CASE WHEN W.utm_source = 'gsearch' THEN W.website_session_id ELSE NULL END) AS gsearch_nonbrand_sessions,
    COUNT(DISTINCT CASE WHEN W.utm_source = 'bsearch' THEN W.website_session_id ELSE NULL END) AS bsearch_sessions
FROM website_sessions AS W
    LEFT JOIN orders AS O ON W.website_session_id = O.website_session_id
WHERE
    W.created_at >  '2012-08-22'
AND W.created_at < '2012-11-29'
AND utm_campaign = 'nonbrand'
GROUP BY 1;
```

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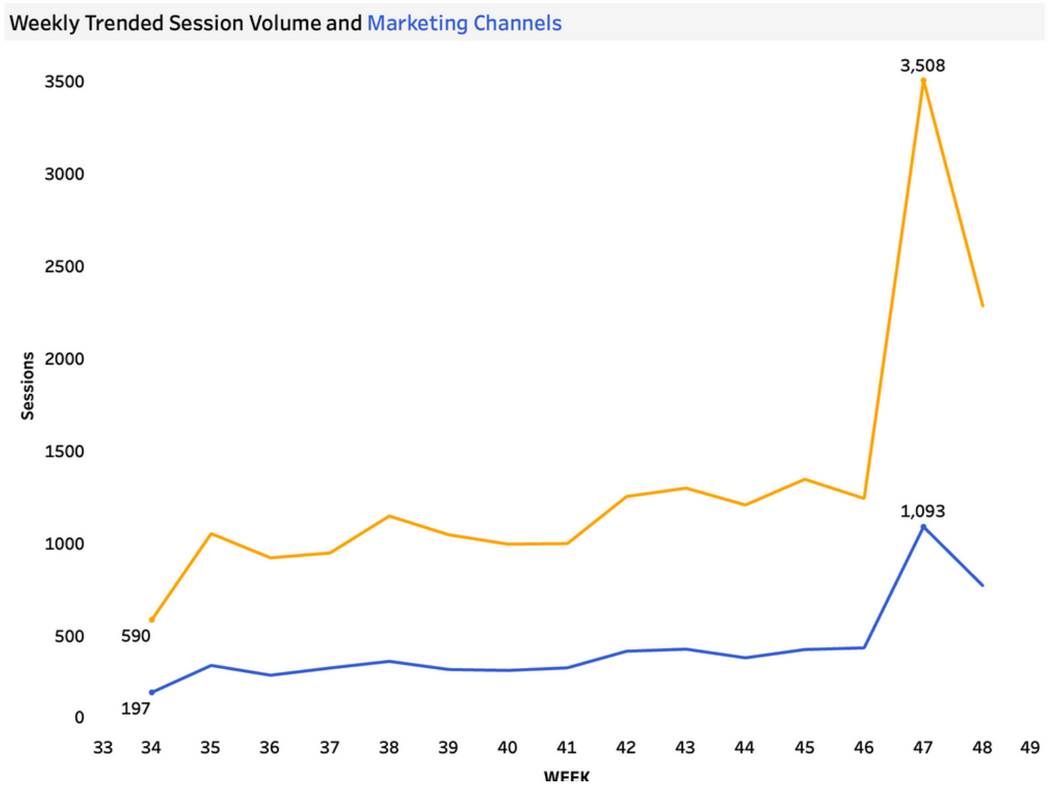
Result Grid Filter Rows: Search Export:

week	week_start_date	sessions	gsearch_nonbrand_sessi...	bsearch_sessions
34	2012-08-22	787	590	197
35	2012-08-26	1399	1056	343
36	2012-09-02	1215	925	290
37	2012-09-09	1280	951	329
38	2012-09-16	1516	1151	365
39	2012-09-23	1371	1050	321
40	2012-09-30	1315	999	316
41	2012-10-07	1332	1002	330
42	2012-10-14	1677	1257	420
43	2012-10-21	1733	1302	431
44	2012-10-28	1595	1211	384
45	2012-11-04	1779	1350	429
46	2012-11-11	1684	1246	438
47	2012-11-18	4601	3508	1093
48	2012-11-25	3060	2286	774



Findings:

- The G search is about three times as big as the B search, which seems consistent across each of these weeks.
- The high session on volume in week 47 is because of Black Friday.

Comparing Channel Order Conversion | SQL

```sql
SELECT
    W.device_type,
    W.utm_source,
    COUNT(W.website_session_id) AS sessions,
    COUNT(O.order_id) AS orders,
    COUNT(O.order_id)/COUNT(W.website_session_id)  AS conversion_rate
FROM website_sessions AS W
    LEFT JOIN orders AS O ON W.website_session_id = O.website_session_id
WHERE W.created_at > '2012-08-22'
AND W.created_at < '2012-09-19'
AND W.utm_campaign = 'nonbrand'
AND W.utm_source in ('gsearch', 'bsearch')
GROUP BY 1,2
ORDER BY 1;
```

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Result Grid | Filter Rows: Search | Export:

devic...	utm_source	sessions	orders	conversion_rate
desktop	bsearch	1162	44	0.0379
desktop	gsearch	3011	136	0.0452
mobile	bsearch	130	1	0.0077
mobile	gsearch	1015	13	0.0128

.Findings:

- Within desktop, G search has a bit of a better conversion rate than B search[4.5% versus 3.8%], and then similarly, within the mobile traffic, we've got a 1.3% conversion rate and a 0.8% conversion rate.
- Both the Desktop and Mobile G search looks like it outperforms against B search.

Channel Portfolio Trends | SQL

```sql
-- Channel Portfolio Trends

SELECT
    WEEK(created_at) AS WEEK,
    MIN(DATE(created_at)) as week_start_date,
    COUNT(DISTINCT website_session_id) AS sessions,
    COUNT(DISTINCT CASE WHEN utm_source = 'gsearch' AND device_type = 'mobile' THEN website_session_id ELSE NULL END) AS gsearch_mobile,
    COUNT(DISTINCT CASE WHEN utm_source = 'bsearch' AND device_type = 'mobile' THEN website_session_id ELSE NULL END) AS bsearch_mobile,
    COUNT(DISTINCT CASE WHEN utm_source = 'bsearch' AND device_type = 'mobile' THEN website_session_id ELSE NULL END)/COUNT(DISTINCT CASE WHEN utm_source = 'gsearch' AND device_type = 'mobile' THEN website_session_id ELSE NULL END) AS 'Bsearchmobile % of Gsearchmobile',
    COUNT(DISTINCT CASE WHEN utm_source = 'gsearch' AND device_type = 'desktop' THEN website_session_id ELSE NULL END) AS gsearch_desktop,
    COUNT(DISTINCT CASE WHEN utm_source = 'bsearch' AND device_type = 'desktop' THEN website_session_id ELSE NULL END) AS bsearch_desktop,
    COUNT(DISTINCT CASE WHEN utm_source = 'bsearch' AND device_type = 'desktop' THEN website_session_id ELSE NULL END)/COUNT(DISTINCT CASE WHEN utm_source = 'gsearch' AND device_type = 'desktop' THEN website_session_id ELSE NULL END) AS 'Bsearchdesktop % of Gsearchdesktop'
FROM website_sessions
WHERE utm_source IN ('gsearch', 'bsearch')
AND utm_campaign = 'nonbrand'
AND created_at >= '2012-11-04'
AND created_at < '2012-12-22'
GROUP BY 1;
```

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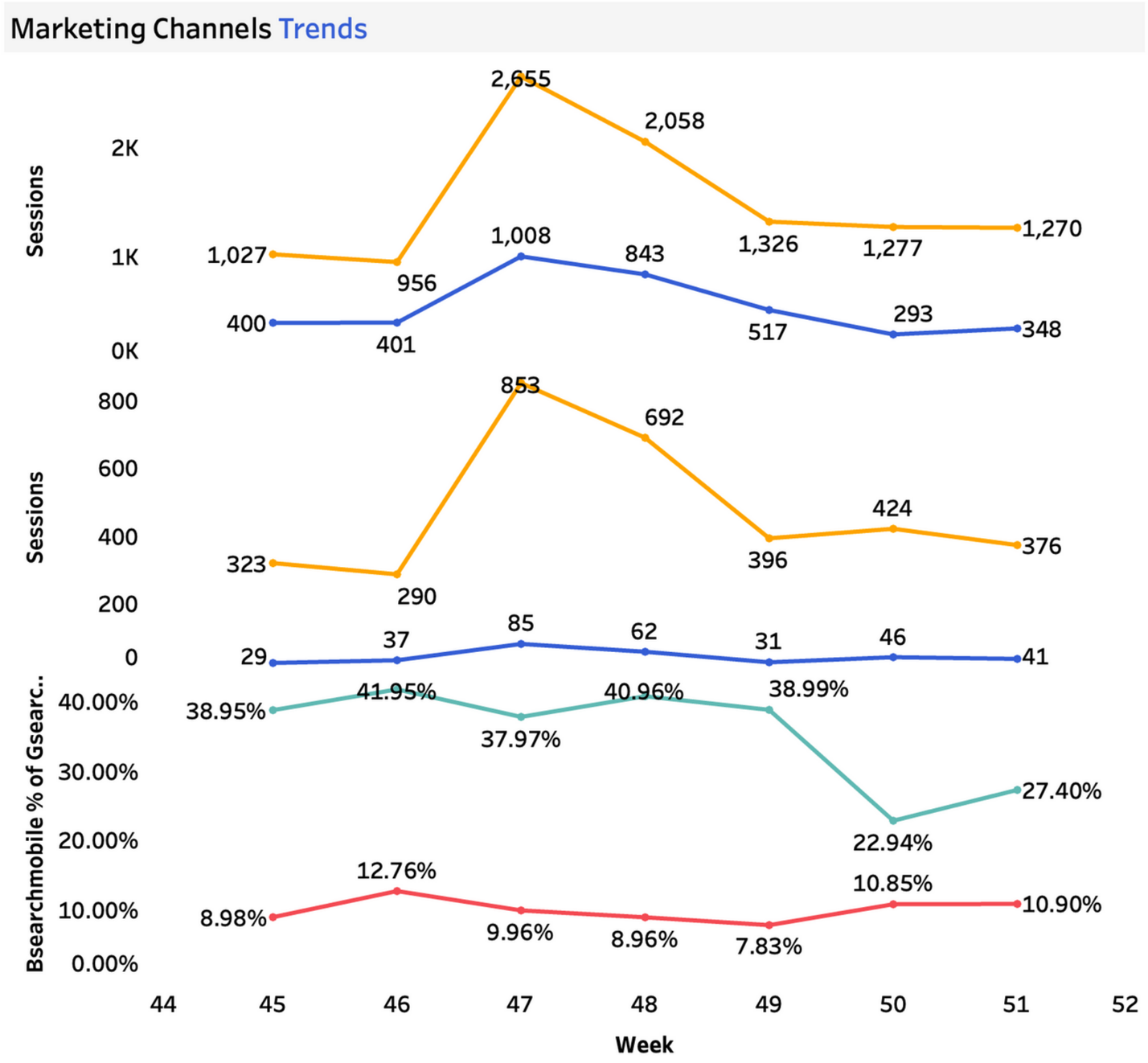
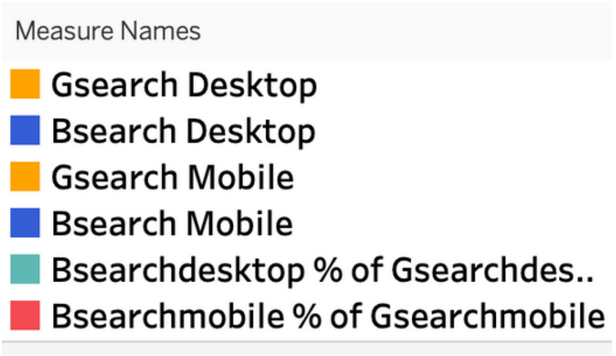
Result Grid | Filter Rows: Search | Export:

WEEK	week_start_date	sessions	gsearch_mob...	bsearch_mob...	Bsearchmobile % of Gsearchmo...	gsearch_deskt...	bsearch_deskt...	Bsearchdesktop % of Gsearchdesk...
45	2012-11-04	1779	323	29	0.0898	1027	400	0.3895
46	2012-11-11	1684	290	37	0.1276	956	401	0.4195
47	2012-11-18	4601	853	85	0.0996	2655	1008	0.3797
48	2012-11-25	3655	692	62	0.0896	2058	843	0.4096
49	2012-12-02	2270	396	31	0.0783	1326	517	0.3899
50	2012-12-09	2040	424	46	0.1085	1277	293	0.2294
51	2012-12-16	2035	376	41	0.1090	1270	348	0.2740





Bid down on B Search non-brand happened on December 2nd, 2012.

Findings:

- We see B search as a percentage of G on mobile is much lower.
- Overall, we saw the same thing earlier in a previous but, interestingly, mobile sessions look pretty steady here, so perhaps b search is less price elastic on mobile, and the volume here is potentially less sensitive to significant changes.
- B search traffic dropped off a bit, but the G search was also down after Black Friday and Cyber Monday, which are major retail online holidays in the United States.

Site Traffic Breakdown | SQL

```sql
-- Analyzing Direct, Brand Driven Traffic
SELECT
    MONTH(created_at),
    MIN(DATE(created_at)) AS month_start_date,
    COUNT(DISTINCT CASE WHEN http_referer IS NOT NULL AND utm_source IS NULL THEN website_session_id ELSE NULL END) AS organic_search,
    COUNT(DISTINCT CASE WHEN http_referer IS NULL THEN website_session_id ELSE NULL END) AS direct_typein,
    COUNT(DISTINCT CASE WHEN utm_campaign = 'brand' THEN website_session_id ELSE NULL END) AS paid_brand,
    COUNT(DISTINCT CASE WHEN utm_campaign = 'nonbrand' THEN website_session_id ELSE NULL END) AS paid_nonbrand,
    COUNT(DISTINCT CASE WHEN http_referer IS NOT NULL AND utm_campaign IS NULL THEN website_session_id ELSE NULL END)/COUNT(DISTINCT CASE WHEN utm_campaign = 'nonbrand' THEN website_session_id ELSE NULL END) AS organic_pct_of_nonbrand,
    COUNT(DISTINCT CASE WHEN http_referer IS NULL THEN website_session_id ELSE NULL END)/COUNT(DISTINCT CASE WHEN utm_campaign = 'nonbrand' THEN website_session_id ELSE NULL END) AS 'Direct_pct_nonbrand',
    COUNT(DISTINCT CASE WHEN utm_campaign = 'brand' THEN website_session_id ELSE NULL END)/COUNT(DISTINCT CASE WHEN utm_campaign = 'nonbrand' THEN website_session_id ELSE NULL END) AS 'brand_pct_nonbrand'
FROM website_sessions
WHERE created_at < '2012-12-23'
GROUP BY 1;
```

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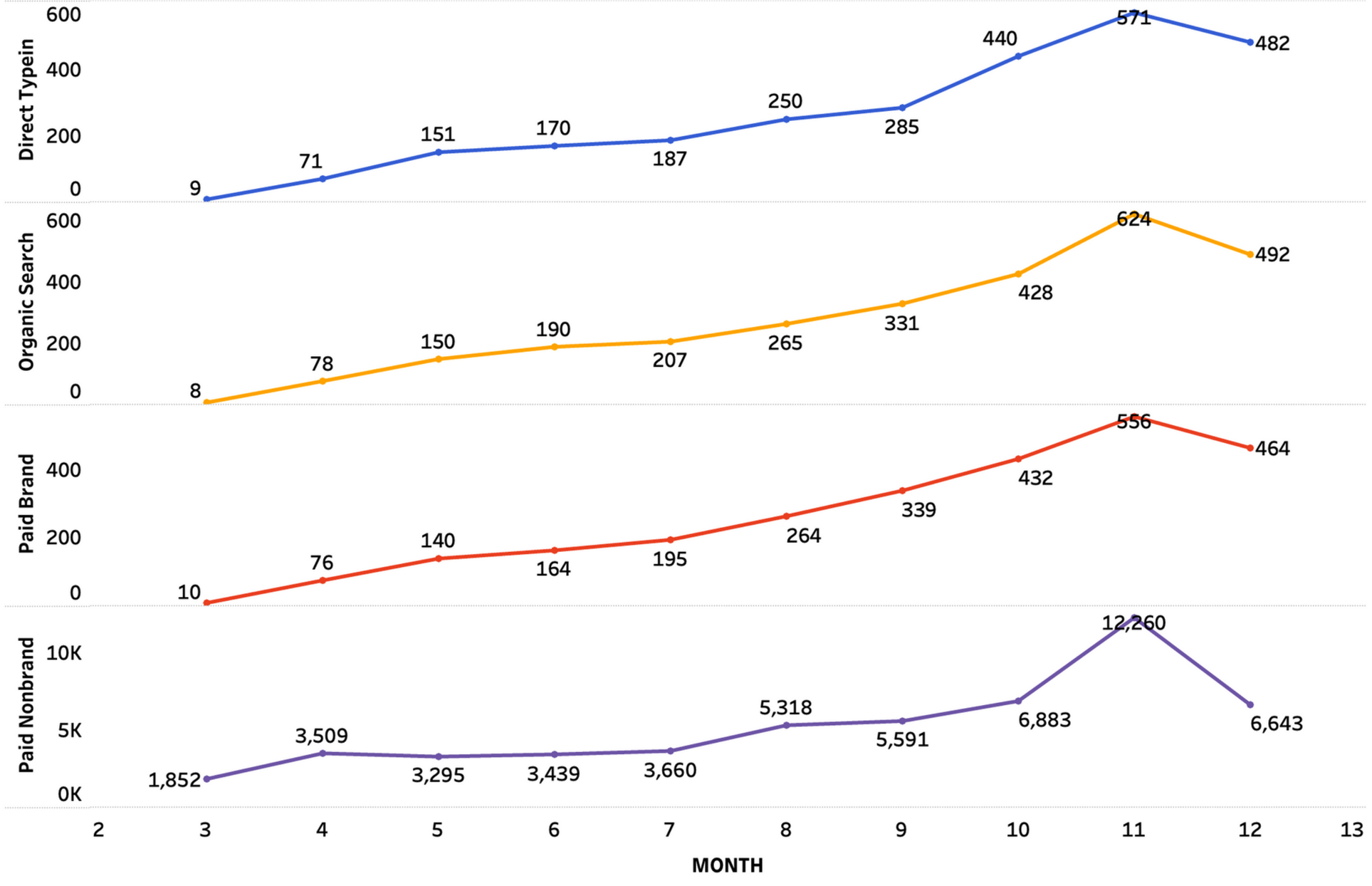
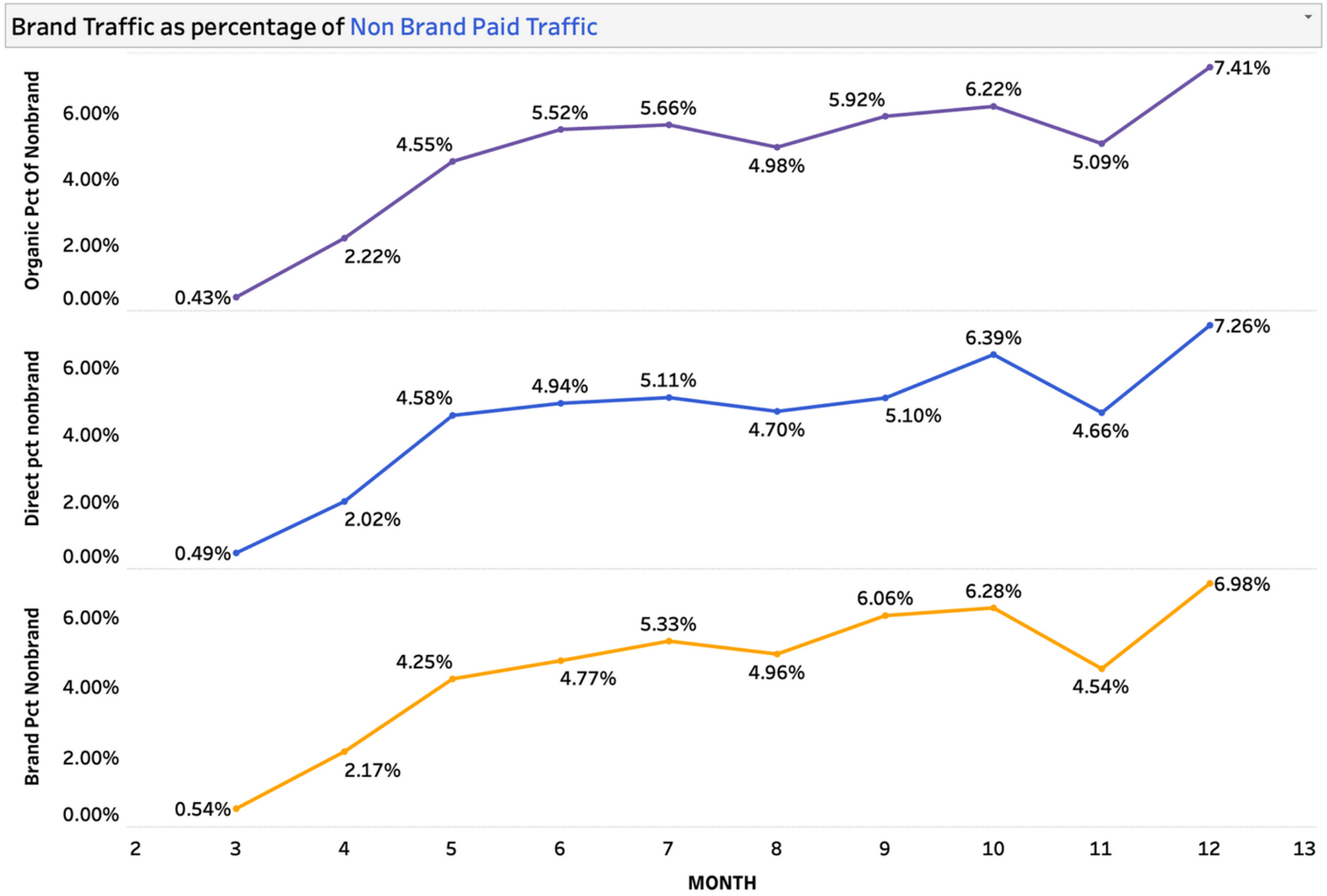
Result Grid | Filter Rows: Search | Export:

MONTH(created_...	month_start_d...	organic_search	direct_typ...	paid_brand	paid_nonbra...	organic_pct_of_nonbr...	Direct_pct_nonbra...	brand_pct_nonbra...
3	2012-03-19	8	9	10	1852	0.0043	0.0049	0.0054
4	2012-04-01	78	71	76	3509	0.0222	0.0202	0.0217
5	2012-05-01	150	151	140	3295	0.0455	0.0458	0.0425
6	2012-06-01	190	170	164	3439	0.0552	0.0494	0.0477
7	2012-07-01	207	187	195	3660	0.0566	0.0511	0.0533
8	2012-08-01	265	250	264	5318	0.0498	0.0470	0.0496
9	2012-09-01	331	285	339	5591	0.0592	0.0510	0.0606
10	2012-10-01	428	440	432	6883	0.0622	0.0639	0.0628
11	2012-11-01	624	571	556	12260	0.0509	0.0466	0.0454
12	2012-12-01	492	482	464	6643	0.0741	0.0726	0.0698

Site Traffic Breakdown





What's interesting here is over time

- We look at organic in April of 2012, organic is about 2% of non-brand, and then it builds over time, and in December, it's been almost 7 1/2 % of the non-brand

- Direct as a percent of non-brand again. We're starting around 2%, kind of similar to organic, and again building up to 7.2% by December brand as a percent of non-brand

- The brand is also a similar story. It's not relatively as high, but it's on a similar trend where it starts very low, just around 2%, and pretty quickly is starting to get up to be a much more material piece of the pie.