MEDIA SURVIVAL ANALYSIS

From Data to Decisions

Digital Transition & Market Re-launch Strategy Post Covid Era

MEDIA SURVIVAL ANALYSIS

PROBLEM STATEMENT

Company:- BHARAT HERALD
Bharat Herald is a legacy newspaper organization that operates in 5 states. Over 7 decades of Operations, the company once printed over 1.2 million copies daily which has now dropped to below 560k.

On top of that, The Covid pandemic accelerated a shift towards digital new consumption and while it's competitors adapted quickly to with mobile platforms, BHARAT HERALD's e-paper pilot failed.

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BUSINESS REQUEST 1: MONTHLY CIRCULATION DROP CHECK

Generate a report showing the top 3 months (2019–2024) where any city recorded the sharpest month-over-month decline in net_circulation

city_name	month	net_circulation	drop_in_circulation
VARANASI	2021-01	382018	59807
VARANASI	2019-11	431606	55649
JAIPUR	2020-01	420680	51858

ANSWER:

The top 2 decline months were observed in **Varanasi** in the months of Jan-2021 and Nov-2019
Followed by **Jaipur** in the month of Jan-2020

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BUSINESS REQUEST 2: YEARLY REVENUE CONCENTRATION BY CATEGORY

Identify ad categories that contributed > 50% of total yearly ad revenue.

year	ad_category	category_name	category_revenue	Total_revenue_year	pct_of_year_total
2019	A001	Government	130510920.36	366141923.04	35.64
2019	A002	FMCG	85415474.00	366141923.04	23.33
2019	A003	Real Estate	87050019.36	366141923.04	23.77
2019	A004	Automobile	63165509.32	366141923.04	17.25
2020	A001	Government	109132381.28	357335726.28	30.54
2020	A002	FMCG	55646505.80	357335726.28	15.57
2020	A003	Real Estate	99935642.56	357335726.28	27.97
2020	A004	Automobile	92621196.64	357335726.28	25.92
2021	A001	Government	105294453.84	372639560.36	28.26
2021	A002	FMCG	79490894.40	372639560.36	21.33
2021	A003	Real Estate	128235646.28	372639560.36	34.41
2021	A004	Automobile	59618565.84	372639560.36	16.00
2022	A001	Government	110133695.20	361715114.68	30.45
2022	A002	FMCG	72904404.68	361715114.68	20.16
2022	A003	Real Estate	110761963.88	361715114.68	30.62
2022	A004	Automobile	67915050.92	361715114.68	18.78
2023	A001	Government	104289580.04	376966469.68	27.67
2023	A002	FMCG	87267821.24	376966469.68	23.15
2023	A003	Real Estate	117999587.20	376966469.68	31.30
2023	A004	Automobile	67409481.20	376966469.68	17.88
2024	A001	Government	108011396.92	373272921.72	28.94
2024	A002	FMCG	61813277.48	373272921.72	16.56
2024	A003	Real Estate	114040862.32	373272921.72	30.55
2024	A004	Automobile	89407385.00	373272921.72	23.95

ANSWER:
There are no ad categories that contributed more than 50% of yearly ad revenue.

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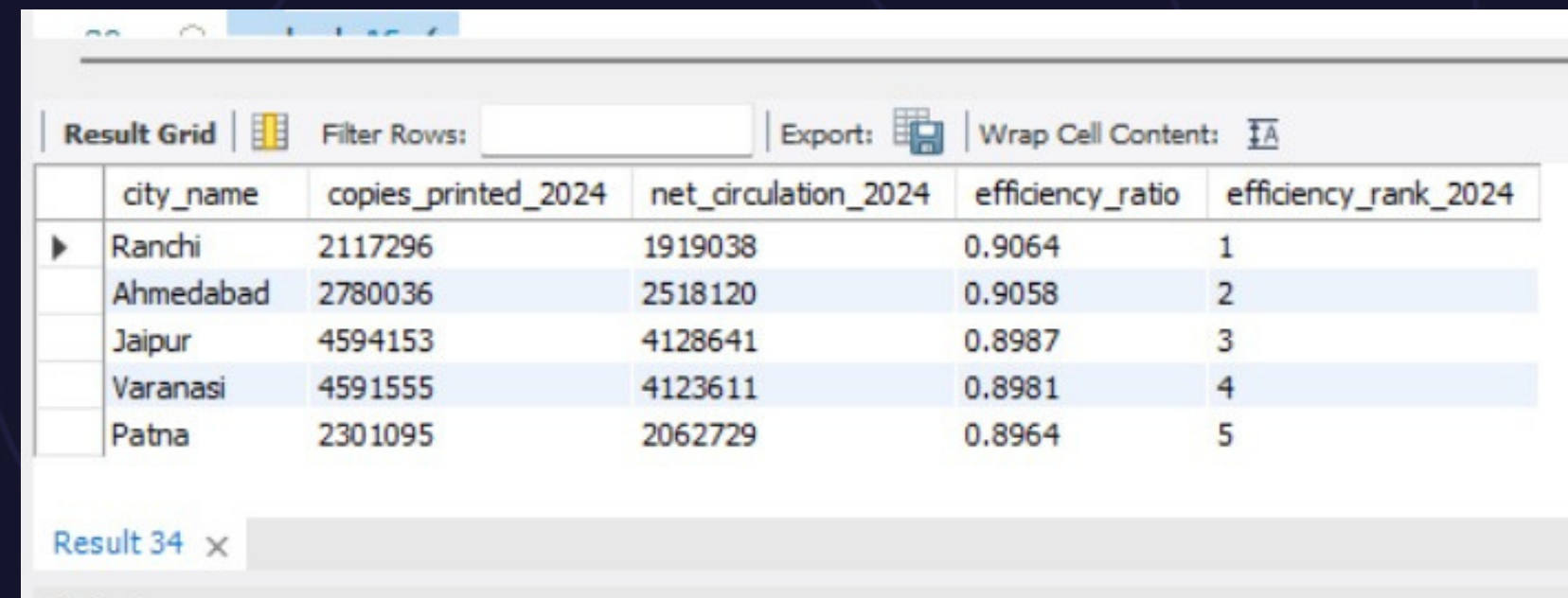
BUSINESS REQUEST 3: 2024 PRINT EFFICIENT LEADERBOARD

For 2024, rank cities by print efficiency = net_circulation / copies_printed. Return top 5.

city_name	copies_printed_2024	net_circulation_2024	efficiency_ratio	efficiency_rank_2024
Ranchi	2117296	1919038	0.9064	1
Ahmedabad	2780036	2518120	0.9058	2
Jaipur	4594153	4128641	0.8987	3
Varanasi	4591555	4123611	0.8981	4
Patna	2301095	2062729	0.8964	5

Result 34 ✕

ANSWER:

The Top 5 cities involve: RANCHI, AHMEDABAD, JAIPUR, VARANASI and PATNA

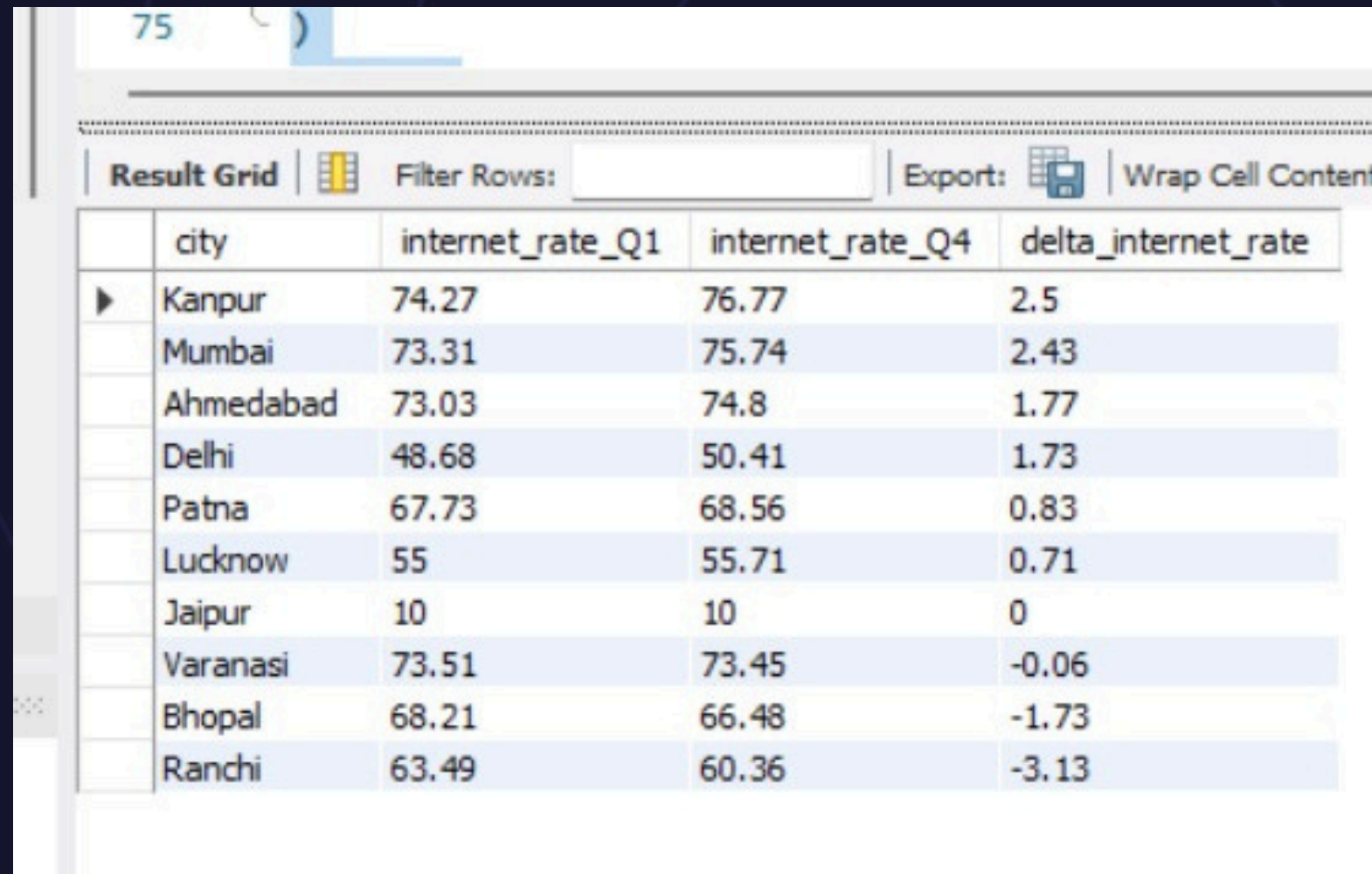# MEDIA SURVIVAL ANALYSIS

BUSINESS REQUEST 4: INTERNET READINESS GROWTH(2021)

For each city, compute the change in internet penetration from Q1-2021 to Q4-2021 and identify the city with the highest improvement

ANSWER:

The city with the highest improvement is **KANPUR.**
In Q1 the rate was 74.27%
In Q4 the rate was 76.77%

This shows an improvement of 2.5%

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Business Request 6

BUSINESS REQUEST 5: CONSISTENT MULTI YEAR DECLINE
Find cities where both net_circulation and ad_revenue decreased every year from 2019 through 2024 (strictly decreasing sequences).

city	year	yearly_net_circulation	yearly_ad_revenue	is_declining_print	is_declining_ad_revenue	is_declining_both
Ahmedabad	2019	239398704	2436373021.28	No	No	No
Ahmedabad	2020	186167736	1993396108.32	No	No	No
Ahmedabad	2021	198181080	2214884564.80	No	No	No
Ahmedabad	2022	223912008	2657861477.76	No	No	No
Ahmedabad	2023	191616912	2436373021.28	No	No	No
Ahmedabad	2024	181304640	2436373021.28	No	No	No
Bhopal	2019	215016768	2576770237.36	No	No	No
Bhopal	2020	201227256	2576770237.36	No	No	No
Bhopal	2021	192605616	2576770237.36	No	No	No
Bhopal	2022	196675056	2811022077.12	No	No	No
Bhopal	2023	155993832	2342518397.60	No	No	No
Bhopal	2024	159427944	2576770237.36	No	No	No
Delhi	2019	260969400	2172038821.20	No	No	No
Delhi	2020	248679432	2172038821.20	No	No	No
Delhi	2021	281136168	2606446585.44	No	No	No
Delhi	2022	266864832	2606446585.44	No	No	No
Delhi	2023	227740320	2389242703.32	No	No	No
Delhi	2024	196338024	2172038821.20	No	No	No
Jaipur	2019	334093536	2275918597.20	No	No	No
Jaipur	2020	312743232	2275918597.20	No	No	No
Jaipur	2021	355610016	2731102316.64	No	No	No
Jaipur	2022	313169256	2503510456.92	No	No	No
Jaipur	2023	266959296	2275918597.20	No	No	No
Jaipur	2024	297262152	2731102316.64	No	No	No
Kanpur	2019	234859320	1819369190.52	No	No	No

city	start_year	end_year	circulation_declines	revenue_declines	comparisons
Ahmedabad	2019	2024	3	2	5
Bhopal	2019	2024	3	1	5
Delhi	2019	2024	4	2	5
Jaipur	2019	2024	3	2	5
Kanpur	2019	2024	2	1	5
Lucknow	2019	2024	3	2	5
Mumbai	2019	2024	4	2	5
Patna	2019	2024	3	2	5
Ranchi	2019	2024	4	1	5
Varanasi	2019	2024	3	1	5

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Business Request 1

Business Request 2

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Business Request 6

BUSINESS REQUEST 6: 2021 READINESS VS ENGAGEMENT OUTLIER

In 2021, identify the city with the highest digital readiness score but among the bottom 3 in digital pilot engagement.

| city	readiness_score_2021	engagement_metric_2021	readiness_rank_desc	engagement_rank_asc	is_outlier
Ahmedabad	289.57	82731	5	7	No
Bhopal	292.84	83111	3	10	No
Delhi	224.3	77378	9	6	No
Jaipur	219.79	63067	10	4	No
Kanpur	300.92	36289	1	1	Yes
Lucknow	292.82	82903	4	9	No
Mumbai	273.33	73519	8	5	No
Patna	283.08	62390	6	3	No
Ranchi	274.56	38686	7	2	No
Varanasi	295.55	82763	2	8	No

ANSWER:

The City is **KANPUR**

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PRIMARY ANALYSIS

What is the trend in copies printed, copies sold, and net circulation across all cities from 2019 to 2024? How has this changed year-over-year?
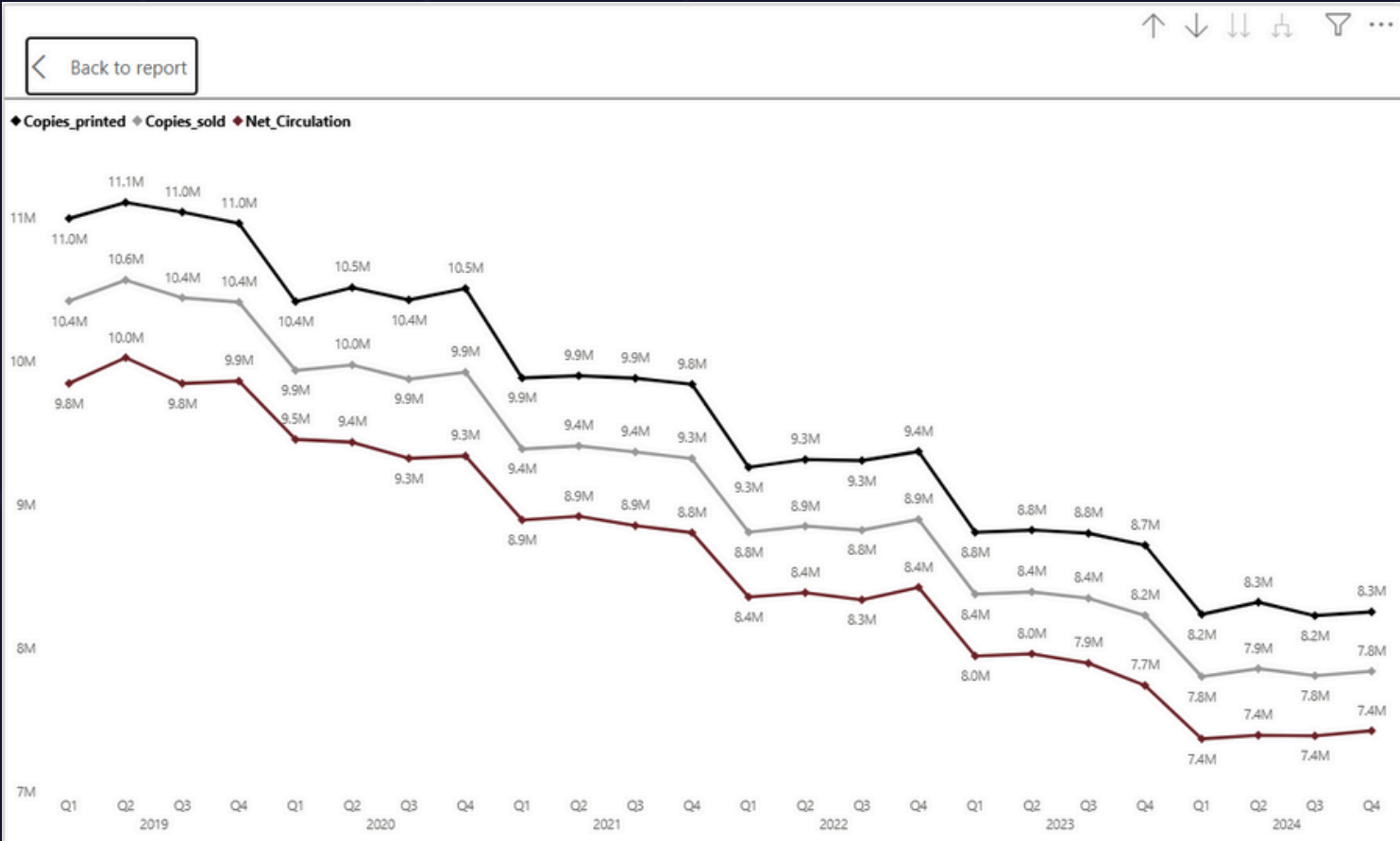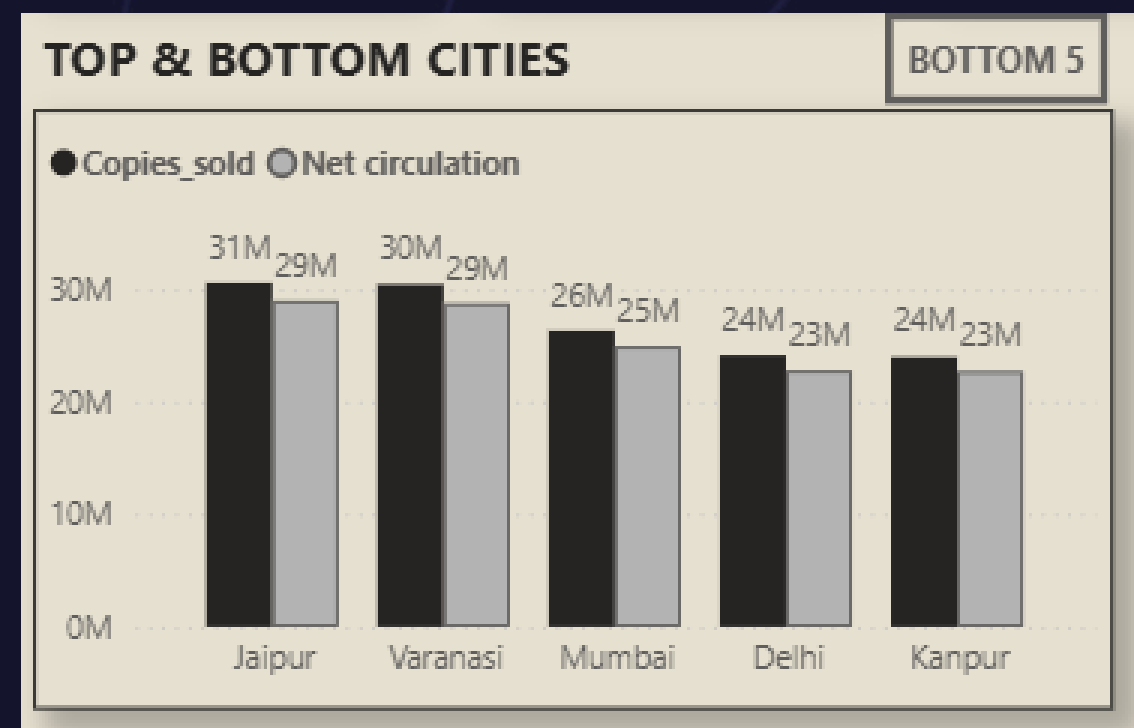

ANSWER:

There is a steady decline in all the three fields: Copies printed, copies sold and Net circulation throughout the years as shown in the image.
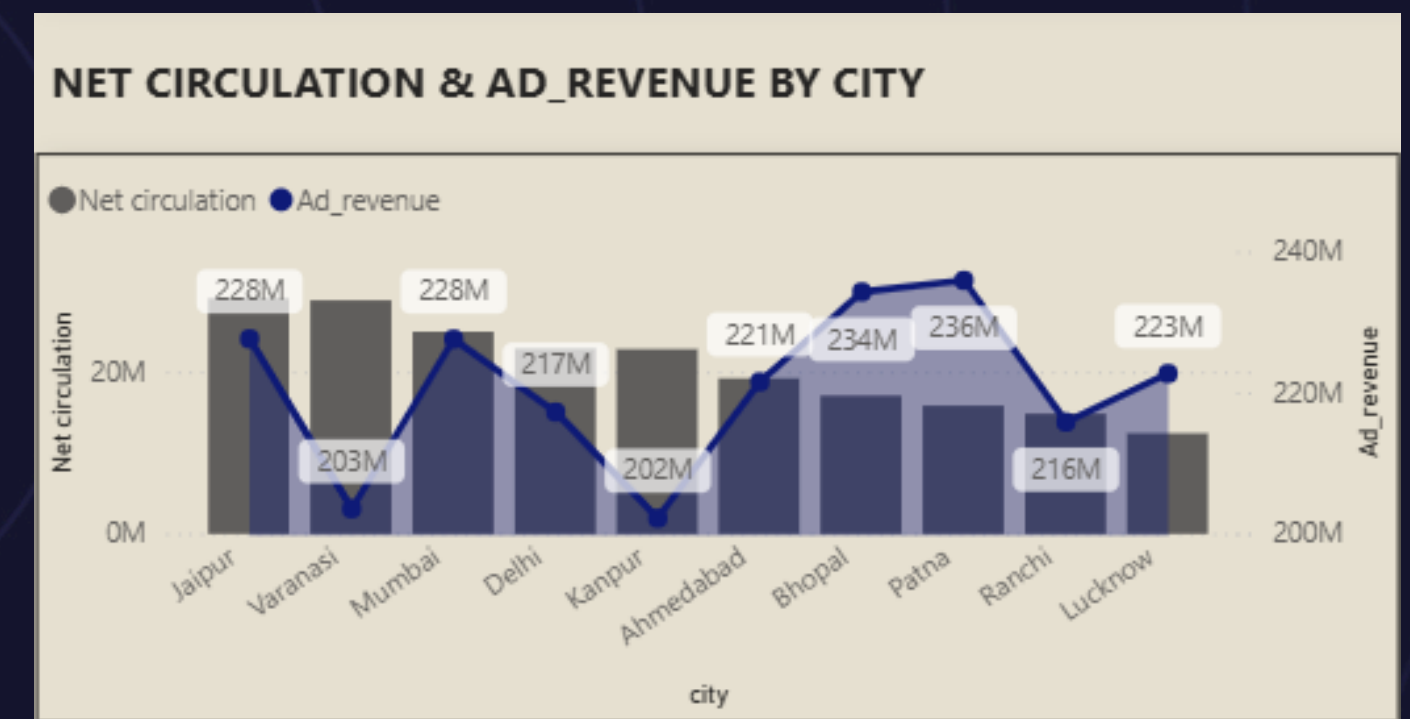
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PRIMARY ANALYSIS

Which cities contributed the highest to net circulation and copies sold in 2024? Are these cities still profitable to operate in?

VARANASI and JAIPUR are the top cities when it comes to copies sold and Net Circulation.
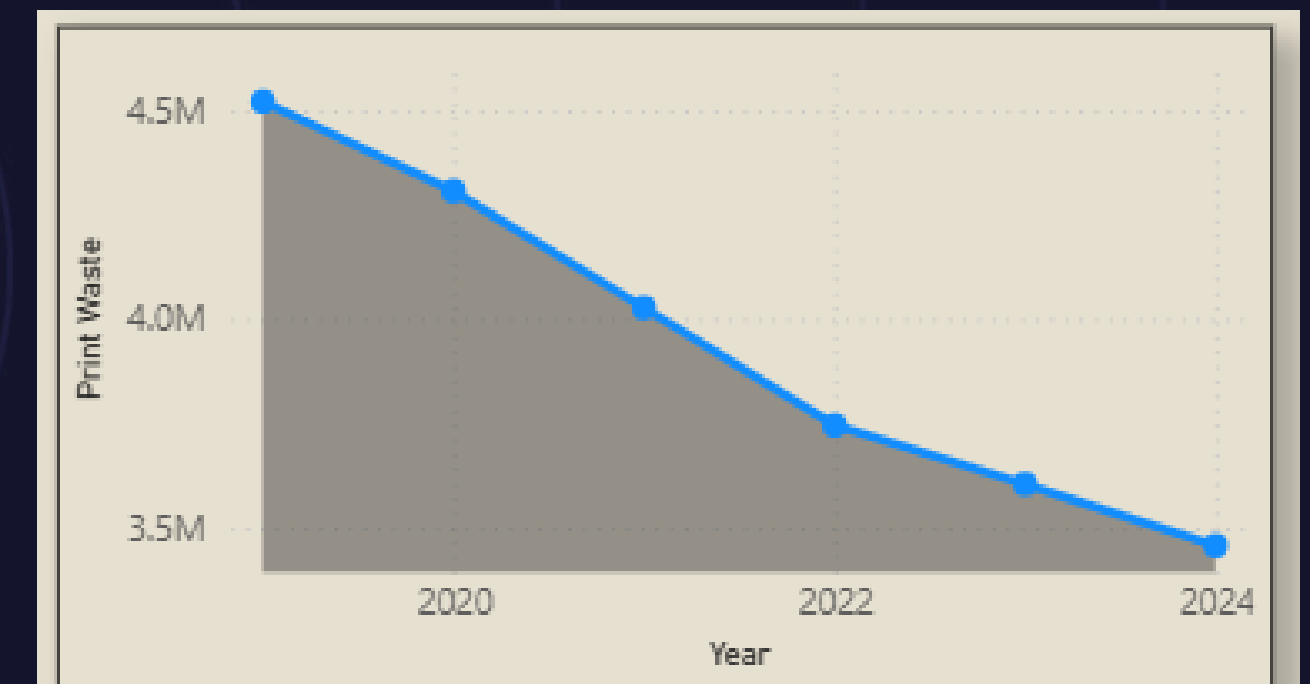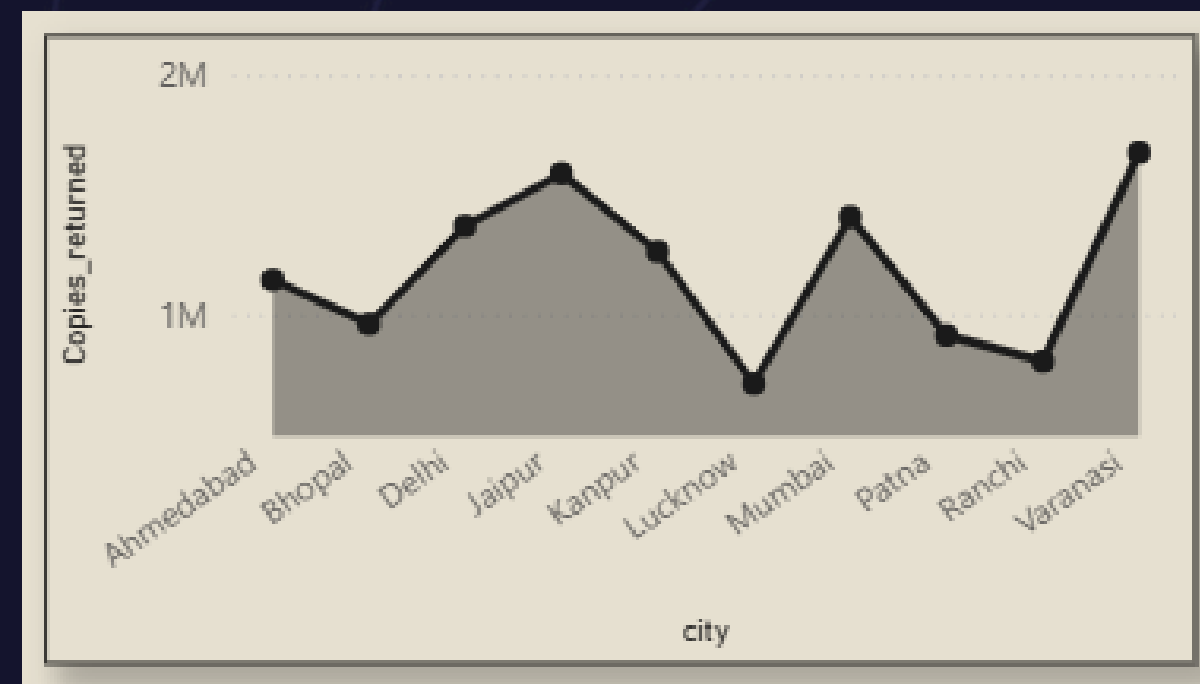
But they were in the bottom when it comes to revenue and ROI.

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PRIMARY ANALYSIS

Which cities have the largest gap between copies printed and net circulation, and how has that gap changed over time?

VARANASI and JAIPUR are the cities which have the largest gap between copies printed an d net circulation. The gap sustained over the years as it stayed between 4.5 to 3.5 million.
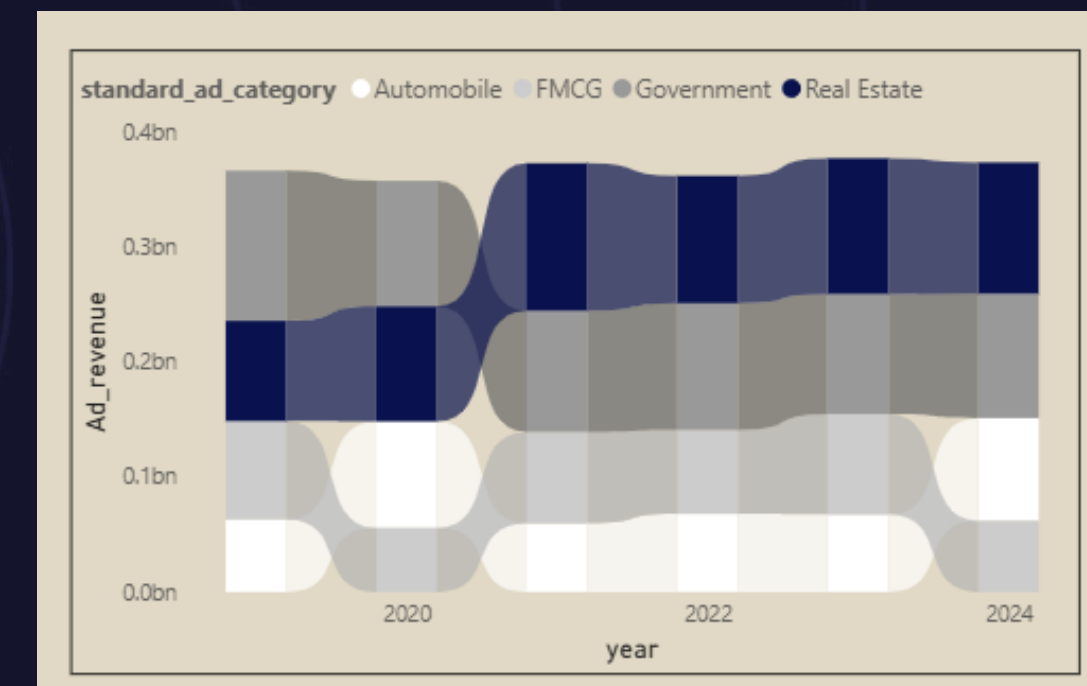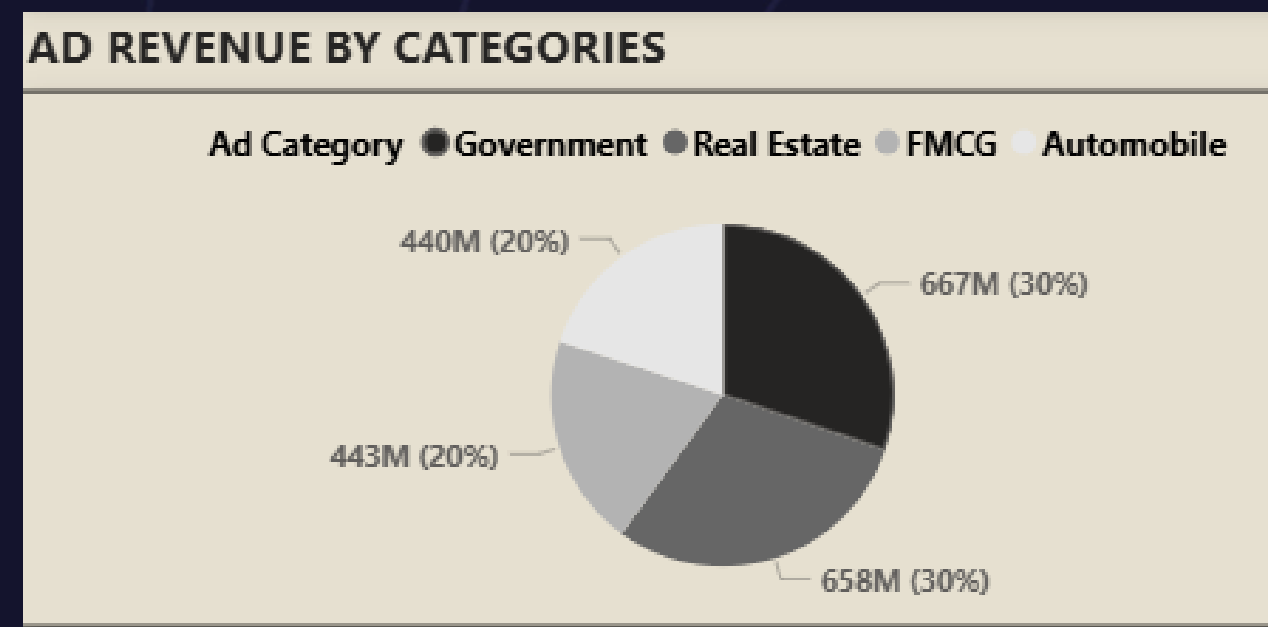
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PRIMARY ANALYSIS

How has ad revenue evolved across different ad categories between 2019 and 2024? Which categories have remained strong, and which have declined?

The total revenue across all categories is 2.21B.
The government contributing 667M and Real Estate 658M.
Both the categories have remained strong.

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PRIMARY ANALYSIS

Which cities generated the most ad revenue, and how does that correlate with their print circulation?

City	Copies_sold	Net_Circulation	Ad revenue(INR)
Patna	16.67M	15.75M	235.88M
Bhopal	17.93M	16.97M	234.25M
Jaipur	30.62M	29.03M	227.59M
Mumbai	26.37M	24.96M	227.56M
Lucknow	13.04M	12.33M	222.67M
Ahmedabad	20.30M	19.16M	221.49M
Delhi	24.19M	22.82M	217.20M
Ranchi	15.54M	14.74M	215.78M
Varanasi	30.47M	28.80M	203.49M
Kanpur	24.02M	22.76M	202.15M

The most ad revenue was generated by cities like Patna, Bhopal ,Jaipur and Mumbai. Jaipur was also in the Top 2 of copies sold cities. Goes to show that ad_revenue corelates with print circulation.
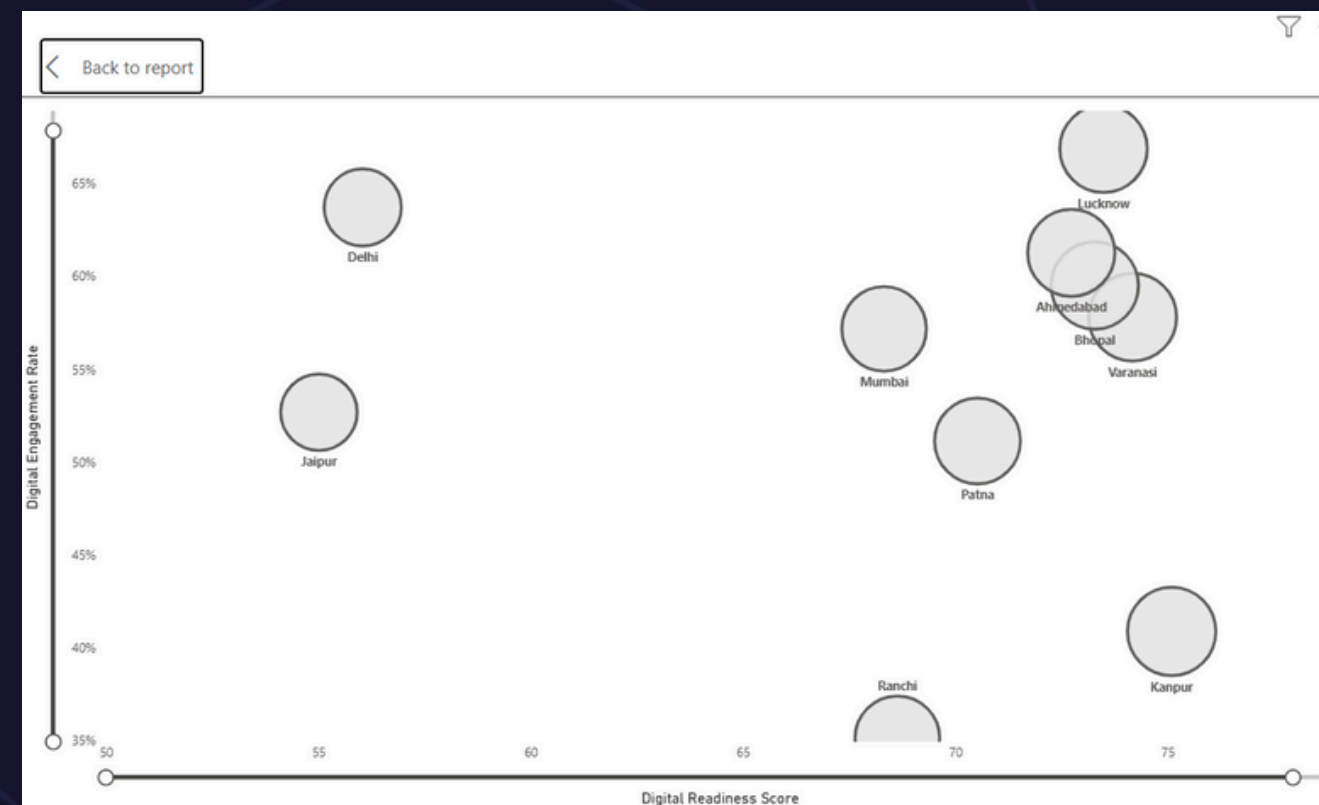
MEDIA SURVIVAL ANALYSIS

PRIMARY ANALYSIS

Which cities show high digital readiness (based on smartphone, internet, and literacy rates) but had low digital pilot engagement?

Varanasi is the city that has calculated HIGH READINESS yet LOW ENGAGEMENT.

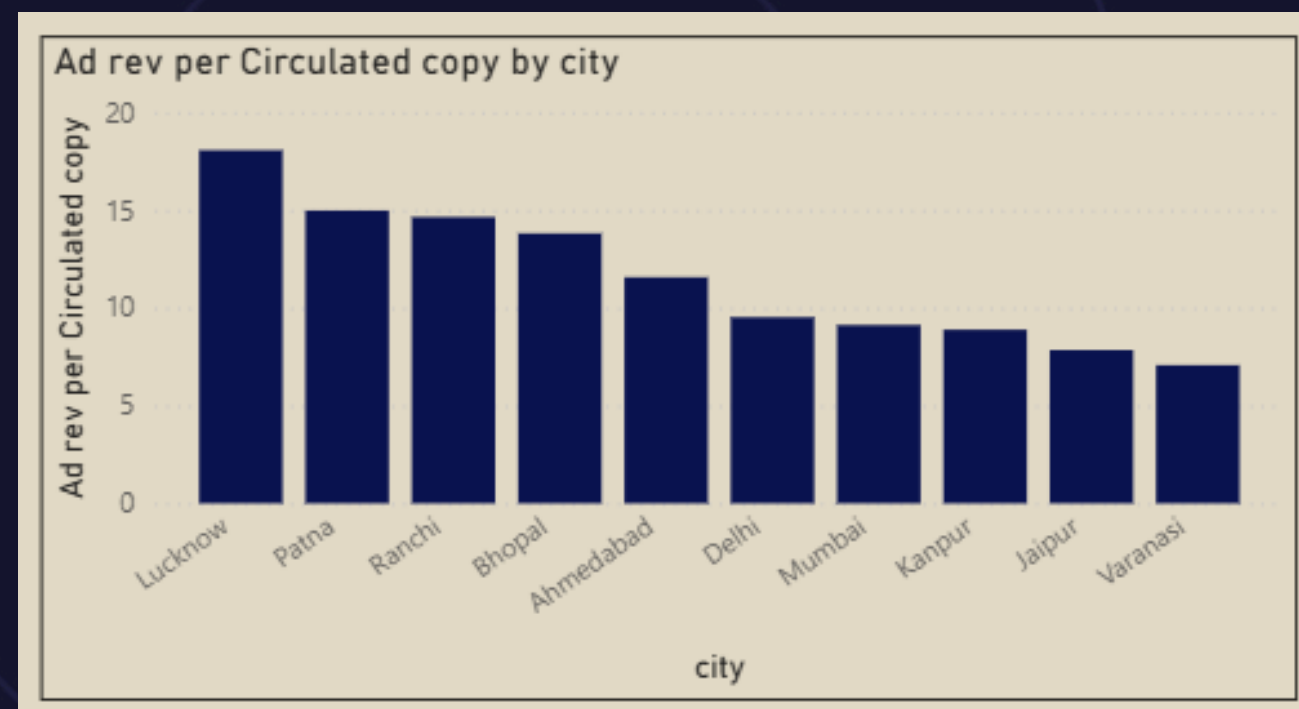Ranchi can be another city but it has medium-low readiness levels.

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PRIMARY ANALYSIS

Which cities had the highest ad revenue per net circulated copy? Is this ratio improving or worsening over time?

Lucknow has the Highest Ad revenue by Circulated copy and this trend has been improving over time

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PRIMARY ANALYSIS

Based on digital readiness, pilot engagement, and print decline, which 3 cities should be prioritized for Phase 1 of the digital relaunch?

city	Total users	Print Waste	Digital_readiness level	Digital engagement Level
Bhopal	140K	1.92M	High Readiness	→ Medium Engagement
Jaipur	120K	3.18M	Medium/Low Readiness	→ Medium Engagement
Mumbai	129K	2.81M	Medium/Low Readiness	→ Medium Engagement
Patna	122K	1.82M	High Readiness	→ Medium Engagement
Varanasi	143K	3.35M	High Readiness	→ Medium Engagement
Kanpur	89K	2.52M	High Readiness	↓ Low Engagement
Ranchi	110K	1.61M	Medium/Low Readiness	↓ Low Engagement
Ahmedabad	135K	2.29M	High Readiness	↑ High Engagement
Delhi	121K	2.74M	Medium/Low Readiness	↑ High Engagement
Lucknow	124K	1.42M	High Readiness	↑ High Engagement

Lucknow and Ahmedabad have both High Readiness and Engagement.

However, Varanasi , Kanpur and Bhopal or Patna should be prioritized as they have High readiness but Medium/Low Engagement. Hence there is more scope for Engagement improvement