



PhonePe Pulse Analysis (2018–2022) : Insights into India's Digital Payment Landscape

The rise of digital payments in India has been a transformative journey, redefining how people transact daily. PhonePe Pulse provides an extensive dataset showcasing transaction and user trends across various regions, offering a deep dive into the adoption and growth of digital payments. This Power BI project analyzes the PhonePe Pulse data from 2018–2022, uncovering trends, patterns, and regional highlights.

By : Vidhi Saxena



Objective

The purpose of this analysis is to gain insights into PhonePe's transaction and user trends across different regions of India from 2018 to 2022. The report aims to:

- Explore user registrations and app usage patterns.
- Analyze transaction volume and amounts across different regions, states, districts, and pin codes.
- Identify the impact of brand, transaction types, and user demographics on PhonePe's performance.



Dataset Description

Dataset Name	Description	Key Attributes
top_user_pin	Tracks user registrations by state, year, quarter, and pincode.	State, Year, Quarter, Pincode, Registered_users, Region
top_user_dist	Provides district-wise user registration data with geolocation details.	State, Year, Quarter, District, Registered_users, Latitude, Longitude, Region
top_trans_pin	Captures transaction count and amount by pincode.	State, Year, Quarter, Pincode, Transaction_count, Transaction_amount, Region
top_trans_dist	Includes district-wise transaction details with geolocation.	State, Year, Quarter, District, Transaction_count, Transaction_amount, Latitude, Longitude, Region
map_user	Tracks app opens and registered users at the district level.	State, Year, Quarter, District, Registered_users, App_opens, Latitude, Longitude, Region
map_trans	Provides district-wise transaction statistics.	State, Year, Quarter, District, Transaction_count, Transaction_amount, Latitude, Longitude, Region
agg_user	Analyzes brand-specific user data.	State, Year, Quarter, Brand, Transaction_count, Percentage, Region
agg_trans	Examines transaction types and their performance over time.	State, Year, Quarter, Transaction_type, Transaction_count, Transaction_amount, Region

Analysis Using MySQL

1. What is the total number of registered users by region for each year and quarter?

Query 1:

```
SELECT State, Year, Quarter, Region, SUM(Registered_users) AS Total_Registered_Users
FROM (
    SELECT State, Year, Quarter, Region, Registered_users FROM top_user_pin
    UNION ALL
    SELECT State, Year, Quarter, Region, Registered_users FROM top_user_dist
) AS users
GROUP BY State, Year, Quarter, Region
ORDER BY Year, Quarter, Region;
```

2. What is the total transaction count and amount by district, year, and quarter?

Query 2:

```
SELECT State, Year, Quarter, District, SUM(Transaction_count) AS Total_Transaction_Count,  
       SUM(Transaction_amount) AS Total_Transaction_Amount  
FROM (  
    SELECT State, Year, Quarter, District, Transaction_count, Transaction_amount FROM  
top_trans_dist  
    UNION ALL  
    SELECT State, Year, Quarter, District, Transaction_count, Transaction_amount FROM  
map_trans  
) AS transactions  
GROUP BY State, Year, Quarter, District
```

3. How do the registered users compare to the transaction count at the district level by year and quarter?

Query 3:

```
SELECT u.State, u.Year, u.Quarter, u.District, u.Registered_users, t.Transaction_count
FROM (
    SELECT State, Year, Quarter, District, Registered_users FROM map_user
) AS u
LEFT JOIN (
    SELECT State, Year, Quarter, District, Transaction_count FROM map_trans
) AS t
ON u.State = t.State AND u.Year = t.Year AND u.Quarter = t.Quarter AND u.District = t.District
ORDER BY u.Year, u.Quarter, u.District;
```

4. Which districts have the highest and lowest transaction amounts over time?

Query 4:

```
SELECT District, Year, Quarter, SUM(Transaction_amount) AS  
Total_Transaction_Amount  
FROM top_trans_dist  
GROUP BY District, Year, Quarter  
ORDER BY Total_Transaction_Amount DESC;
```

5. What is the total transaction count by brand (from the agg_user table) for each year and quarter?

Query 5:

```
SELECT State, Year, Quarter, Brand, SUM(Transaction_count) AS Total_Transaction_Count  
FROM agg_user  
GROUP BY State, Year, Quarter, Brand  
ORDER BY Year, Quarter, Brand;
```


6. What is the breakdown of transaction types (from agg_trans) for each region over time?

Query 6:

```
SELECT State, Year, Quarter, Region, Transaction_type, SUM(Transaction_count) AS  
Total_Transaction_Count  
FROM agg_trans  
GROUP BY State, Year, Quarter, Region, Transaction_type  
ORDER BY Year, Quarter, Region, Transaction_type;
```

7. What is the relationship between registered users and app opens at the district level?

Query 7:

```
SELECT u.State, u.Year, u.Quarter, u.District, u.Registered_users, m.App_opens  
  
FROM map_user AS u  
  
LEFT JOIN map_user AS m  
  
ON u.State = m.State AND u.Year = m.Year AND u.Quarter = m.Quarter AND u.District =  
  
m.District  
  
ORDER BY u.Year, u.Quarter, u.District;
```

8. What is the percentage growth in registered users compared to transaction amounts by region?

Query 8:

```
SELECT users.State, users.Year, users.Quarter, users.Region,  
       SUM(users.Registered_users) AS Total_Registered_Users,  
       SUM(transactions.Transaction_amount) AS Total_Transaction_Amount,  
       (SUM(transactions.Transaction_amount) / SUM(users.Registered_users)) AS Avg_Transaction_Per_User  
FROM ( SELECT State, Year, Quarter, Region, Registered_users FROM top_user_pin  
      UNION ALL  
      SELECT State, Year, Quarter, Region, Registered_users FROM top_user_dist  
      ) AS users  
LEFT JOIN (SELECT State, Year, Quarter, Region, Transaction_amount FROM top_trans_pin  
          UNION ALL  
          SELECT State, Year, Quarter, Region, Transaction_amount FROM top_trans_dist  
          ) AS transactions  
ON users.State = transactions.State  
   AND users.Year = transactions.Year  
   AND users.Quarter = transactions.Quarter  
   AND users.Region = transactions.Region  
GROUP BY users.State, users.Year, users.Quarter, users.Region  
ORDER BY users.Year, users.Quarter, users.Region;
```

9. How do the transaction amounts correlate with the user registration at the pin code level over time?

Query 9:

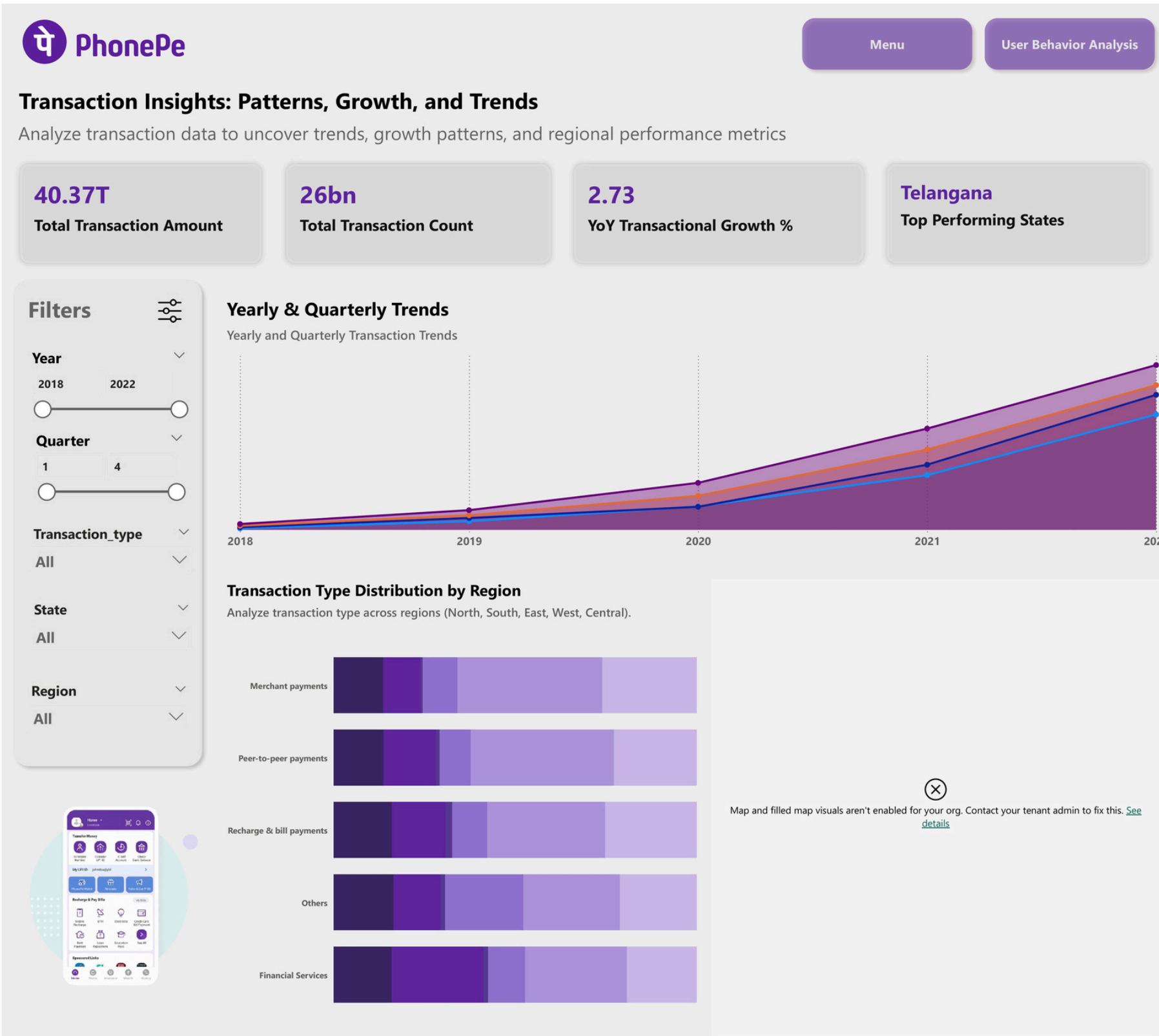
```
SELECT p.State, p.Year, p.Quarter, p.Pincode, SUM(p.Registered_users) AS Total_Registered_Users,  
       SUM(t.Transaction_amount) AS Total_Transaction_Amount  
FROM top_user_pin AS p  
LEFT JOIN top_trans_pin AS t  
ON p.State = t.State AND p.Year = t.Year AND p.Quarter = t.Quarter AND p.Pincode = t.Pincode  
GROUP BY p.State, p.Year, p.Quarter, p.Pincode  
ORDER BY Year, Quarter, Pincode;
```

10. Which regions have the highest user engagement (app opens vs. registered users)?

Query 10:

```
SELECT State, Year, Quarter, Region, SUM(App_opens) AS Total_App_Opens, SUM(Registered_users) AS  
Total_Registered_Users,  
       (SUM(App_opens) / SUM(Registered_users)) AS Engagement_Rate  
FROM map_user  
GROUP BY State, Year, Quarter, Region  
ORDER BY Engagement_Rate DESC;
```

Dashboard 1 : Transactional Analysis





THANK YOU!!!

By : Vidhi Saxena