

The image is a cover for a report titled 'PayTM Sales Performance Analysis'. It features a dark, atmospheric photograph of a city skyline at dusk or dawn, with numerous skyscrapers and a complex network of elevated roads or highways. The sky is a deep blue-grey. In the top left corner, the text 'PayTM' is in a small, white, sans-serif font, followed by 'Sales Performance Analysis' in a large, bold, white, sans-serif font. Below the title, on the left side, the text 'Time Period from 2019-2020' is written in a smaller, white, sans-serif font. A bright orange rounded rectangle is positioned in the bottom right corner of the image.

PayTM Sales Performance Analysis

Time Period from 2019-2020

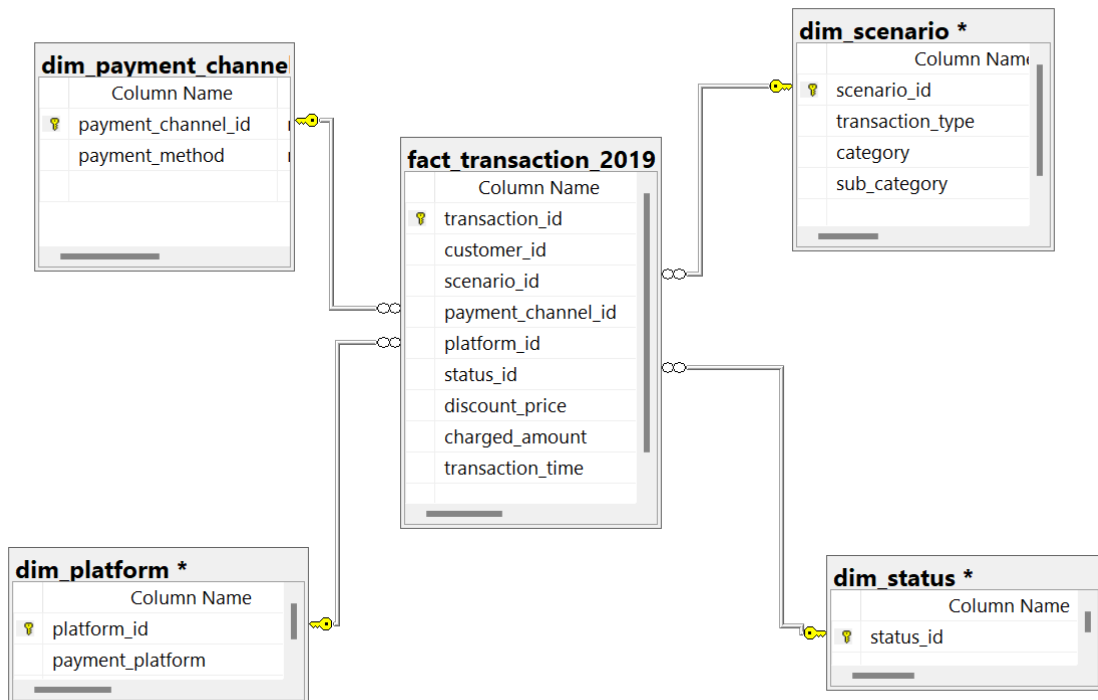
I . Introduction:

Paytm is India's largest financial services firm providing an entire range of online payments & financial solutions to customers, online retailers and service partners. The company works towards a vision of introducing at least half a billion Indians into the mainstream economy through payments, trade, finance, recruitment, and financial services. The primary business of Paytm is digital payments. Paytm serves as a payment gateway to customers and merchants to make seamless payments from cards, bank accounts and other e-wallets. Paytm also provides a range of payment facilities, such as mobile recharges, bill payments, movie tickets, taxi, train and flight tickets, loan payments, insurance, forex, etc. Consumers can directly link their bank accounts and credit cards to their Paytm account to make seamless payments on different retail and online ecommerce sites.

1.1 Scope:

This data analytics project will involve analyzing the sales performance of PayTM. Identifying and analyzing sales trends over time with Time Series Analysis to understand seasonality, growth patterns, or any fluctuations in sales performance. Providing actionable insights and recommendations based on the analysis. This might include suggestions for optimizing sales strategies, improving customer acquisition or retention, or capitalizing on emerging market opportunities.

1.2 Database Diagram:



The above is the database diagram for payment transactions 2019, similar to 2020. The tables are linked together in a "one to many" relationship. It allows an entity in one table to be linked to multiple entities in another table. This creates a flexible structure that allows for easy data expansion. This helps maintain consistency and synchronization in the database.

The database includes 6 tables:

- **fact_transaction**: Store information of all types of transactions: Payments, Top-up, Transfers, Withdrawals of 2019, 2020.
- **dim_scenario**: Detailed description of transaction types.
- **dim_payment_channel**: Detailed description of payment methods..
- **dim_platform**: Detailed description of payment devices.
- **dim_status**: Detailed description of the results of the transaction.

1.3 Business Requirement:

- TOTAL REVENUE OF SUCCESSFUL TRANSACTIONS.
- HOW TOTAL REVENUE CHANGES COMPARING TO THE BEGINNING(1/2019) ?
- TOP 3 MONTH WITH FAILED TRANSACTIONS EACH YEAR.
- REVENUE OF EACH MONTH IN 2019, 2020.
- REVENUE OF EACH CATEGORY CONTRIBUTES TO THE TOTAL.
- CUSTOMER SEGMENTATION BY TRANSACTION AMOUNT.
- CUSTOMER SEGMENTATION BY RFM MODEL.

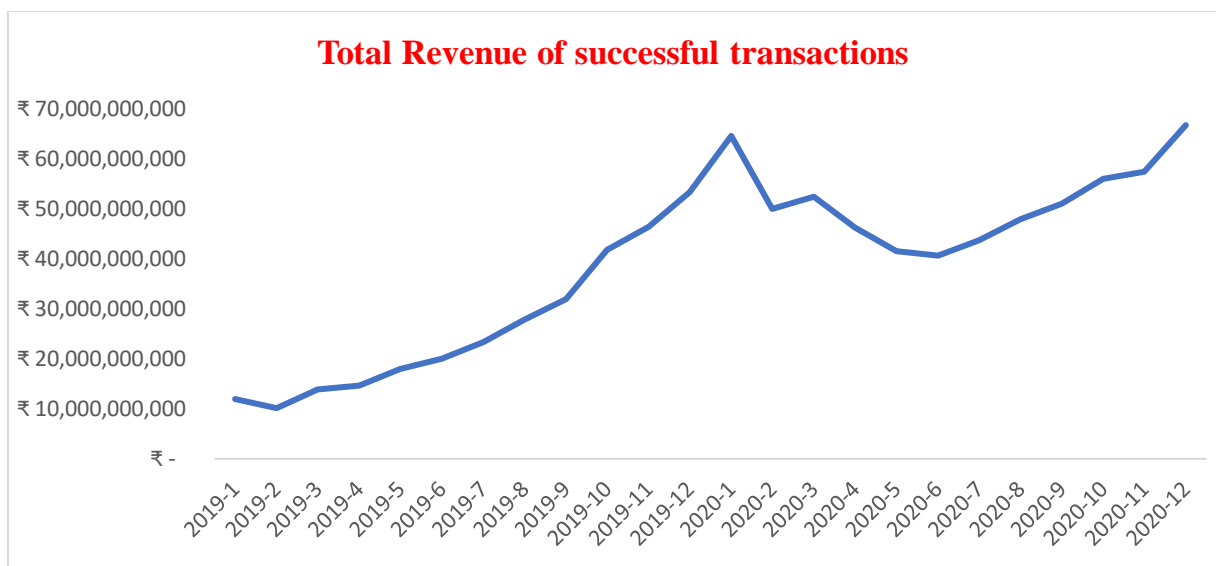
II. DATA ANALYSIS:

1.Total Revenue of successful transactions:

SQL Query

```
SELECT YEAR(transaction_time) as year,
        MONTH(transaction_time) as month,
        CONCAT(YEAR(transaction_time),'-',MONTH(transaction_time)) as
date,
        SUM(charged_amount *1.0) as total_revenue
FROM fact_transaction_2019
WHERE status_id = 1
GROUP BY YEAR(transaction_time),
        MONTH(transaction_time)
UNION
SELECT YEAR(transaction_time) as year,
        MONTH(transaction_time) as month,
        CONCAT(YEAR(transaction_time),'-',MONTH(transaction_time)) as
date,
        SUM(charged_amount *1.0) as total_revenue
FROM fact_transaction_2020
WHERE status_id = 1
GROUP BY YEAR(transaction_time),
        MONTH(transaction_time)
```

Output:



PayTM's revenue chart grew steadily throughout the year, especially with shopping demand at the end of the year increasing sharply with many discounts and explosive promotions, causing sales in the last quarter of the year to increase significantly in both years. That decreased in the first quarter of the following year and

began to recover again, forming a cycle. This shows that customer transaction activity is seasonal trend. Specifically, Increased spending during the 4th quarter, often due to festive seasons, holidays, or year-end sales, might contribute to higher transaction volumes and subsequently increased revenue. Spending patterns during festive seasons or specific events could drive higher transactions. Conversely, the 1st quarter might experience a slowdown post-holiday season, leading to a drop in transactions and revenue.

Another point is that in 2020, although there is still a seasonal trend, total revenue per month increased very strongly compared to 2019. This is explained because the COVID-19 epidemic appeared in India in January 2020.

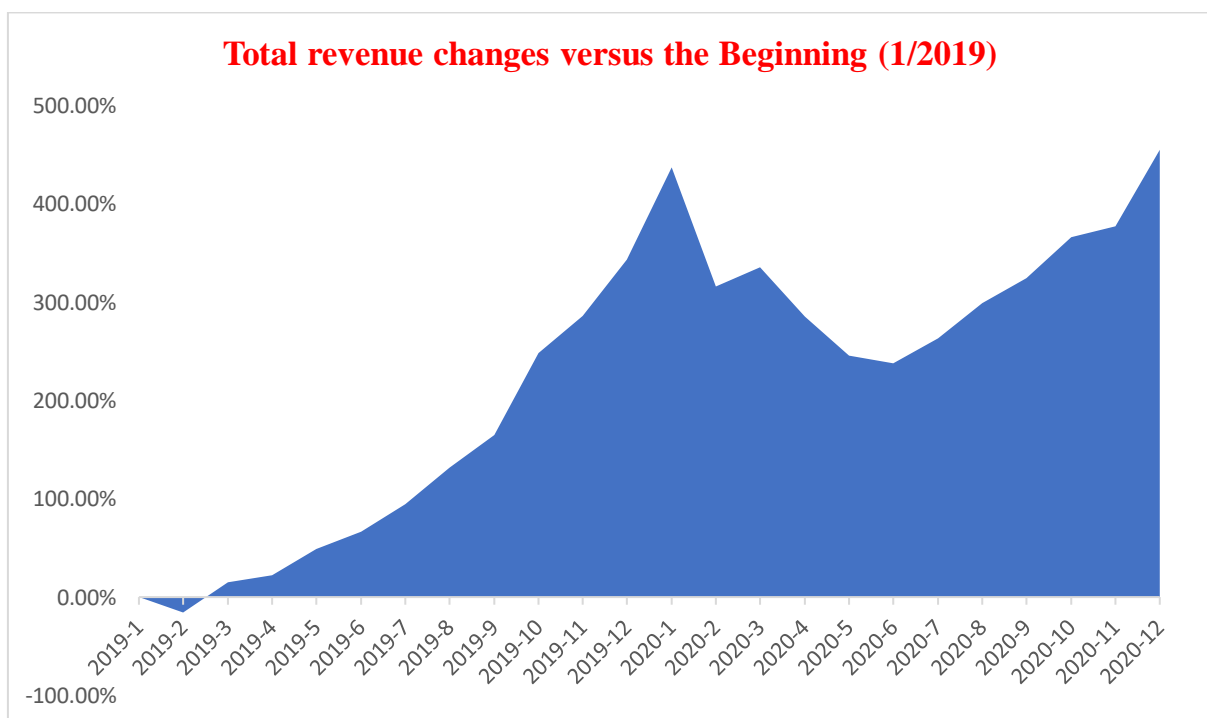
Initially, the lockdown resulted in a decline in transactions due to restricted movement, economic uncertainty, and reduced consumer spending. Then PayTM diversified its services to include essential goods delivery, bill payments, and other essential services. This expansion catered to the changing needs of consumers during the lockdown, contributing to increased transaction revenue in specific sectors. Additionally, The government encouraged digital transactions and promoted cashless payments as part of COVID-19 safety measures. This initiative further boosted the usage of digital payment platforms like PayTM, leading to increased transaction revenue.

2. How total revenue changes comparing to the beginning (1/2019) ?

SQL Query:

```
WITH change_table AS (  
    SELECT YEAR(transaction_time) as year  
        ,MONTH(transaction_time) as month  
        ,CONCAT(YEAR(transaction_time),' ',MONTH(transaction_time)) as  
date  
        ,SUM(charged_amount) as total_revenue  
    FROM (SELECT * FROM fact_transaction_2019  
        UNION  
        SELECT * FROM fact_transaction_2020) as fact  
    WHERE status_id = 1  
    GROUP YEAR(transaction_time), MONTH(transaction_time)  
)  
SELECT *,  
    ,FIRST_VALUE(total_revenue) as begin_revenue  
    ,FORMAT((total_revenue / FIRST_VALUE(total_revenue)) OVER  
(ORDER BY year,month ) - 1, 'p') as change_rate  
FROM change_table
```

Output:



By the percentage unit, we can clearly observe how each month changes compared to the beginning of the period. The end of the year recorded a significant increase of 437% and 455%, this is explained by the extremely high demand for shopping and using payment services of customers along with the outbreak of the disease causing everyone must pay online.

In 2019, there was a consistent upward trend in revenue throughout the year, with a notable surge towards the end, likely due to festive seasons and increased spending during the holiday period. This trend continued in early 2020, possibly extending from the momentum of the previous year.

Starting from March 2020, there was a deviation from the upward trend, possibly indicating the initial impact of the COVID-19 pandemic. The growth rates decreased, suggesting a slowdown in revenue compared to the exponential growth observed in the previous months. Despite the slowdown, PayTM's revenue remained notably higher in 2020 than in 2019, even during the months when growth rates dropped. This resilience might indicate the company's adaptability to changing circumstances, possibly by diversifying services or capitalizing on the increased adoption of digital transactions during the pandemic. The impact of the pandemic seems evident in the quarterly shifts. While the initial months of 2020 saw tremendous growth, subsequent months, especially from March to June, reflected a gradual decline in growth rates. However, there was a slight rebound in the latter part of the year (from July to December).

Despite the fluctuations caused by the pandemic, there was an overall positive growth trend, showcasing PayTM's ability to sustain and even grow its revenue base over the analyzed period. While the COVID-19 pandemic caused fluctuations in growth rates, PayTM demonstrated resilience and maintained a generally upward revenue trajectory, leveraging its adaptability and likely benefiting from the increasing preference for digital payments during challenging times.

3. Top 3 month with failed transactions each year:

SQL Query:

```
WITH failed_tran AS (  
    SELECT YEAR(transaction_time) as year,  
           MONTH(transaction_time) as month,  
           COUNT(transaction_id) as number_failed_trans  
    FROM fact_transaction_2019  
    WHERE status_id = 0  
    GROUP BY YEAR(transaction_time),  
             MONTH(transaction_time)  
    UNION  
    SELECT YEAR(transaction_time) as year,  
           MONTH(transaction_time) as month,  
           COUNT(transaction_id) as number_failed_trans  
    FROM fact_transaction_2020  
    WHERE status_id = 0  
    GROUP BY YEAR(transaction_time) ,  
             MONTH(transaction_time)  
)  
, rank_tran AS (  
    SELECT *,  
           RANK () OVER (PARTITION BY year ORDER BY number_failed_trans)  
    as rank  
    FROM failed_tran  
)  
SELECT *  
FROM rank_tran  
WHERE rank < 4  
ORDER BY year, month
```

Output:

	year	month	number_failed_trans	rank
1	2019	12	6854	1
2	2019	10	6755	2
3	2019	11	6285	3
4	2020	12	14436	1
5	2020	11	13172	2
6	2020	8	11787	3

We can see that the months with the highest failed transactions are in the last quarter of the year and are also the quarters with the highest revenue. This shows that there is a positive relationship between these two indicators. The higher the number of transactions and the higher the total transaction value, the higher the number of failed

transactions. In addition, in 2020 the total number of failed transactions (39,395) is nearly 2 times higher than in 2019 (19,894). This can be explained by the following reasons:

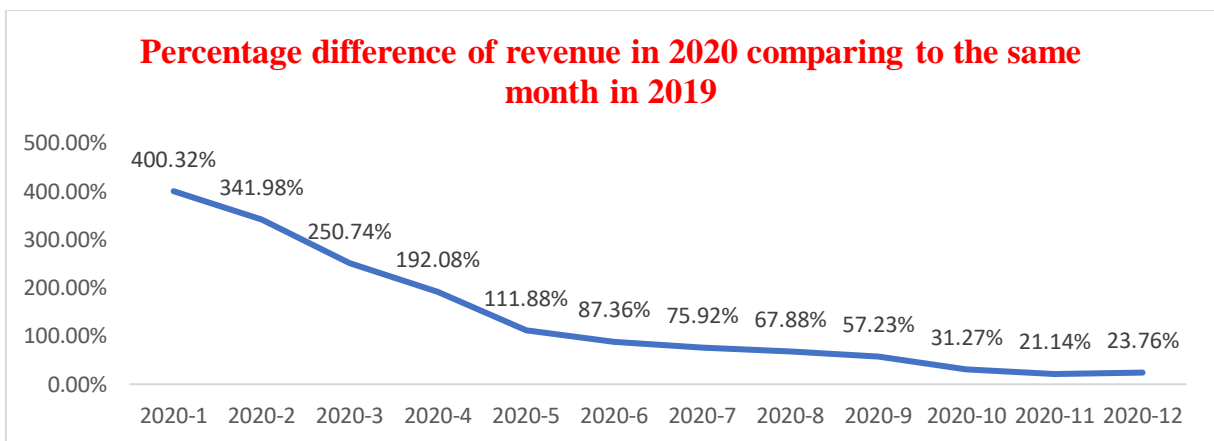
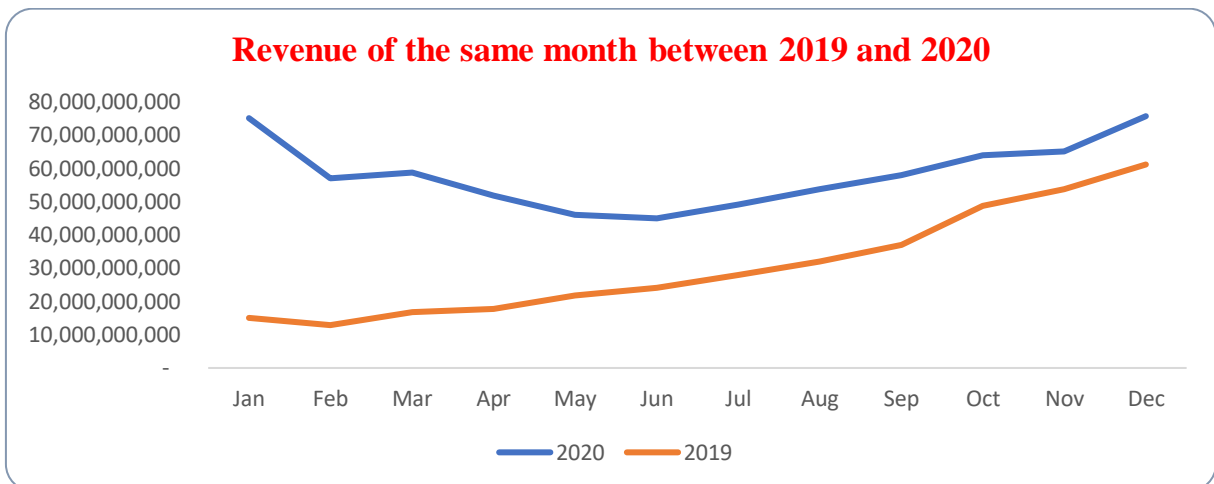
- **Increased Digital Adoption:** With people shifting heavily toward digital transactions in 2020 due to safety concerns and limited physical interactions, the surge in online transactions might have overwhelmed systems, resulting in higher failure rates.
- **Technology Challenges:** Rapid changes in technology and scaling up infrastructure to accommodate increased demand might have caused system failures or errors leading to failed transactions.
- **Changes in Consumer Behavior:** As people adjusted to remote work and lifestyle changes, their spending habits and transaction patterns might have shifted, resulting in a different nature of transactions, potentially leading to more errors or failed attempts.
- **Operational Challenges:** Companies like PayTM might have faced operational hurdles in ensuring seamless transactions due to workforce limitations, logistical challenges, or disruptions in supply chains caused by the pandemic.

4. Revenue of each month 2019, 2020:

SQL Query:

```
WITH CTE AS
(
    SELECT
        CAST(transaction_time AS DATE) AS transaction_time
        ,SUM(1.0*charged_amount) AS charged_amount
    FROM fact_transaction_2019
    GROUP BY CAST(transaction_time AS DATE)
    UNION
    SELECT
        CAST(transaction_time AS DATE) AS transaction_time
        ,SUM(1.0*charged_amount) AS charge_amount
    FROM fact_transaction_2020
    GROUP BY CAST(transaction_time AS DATE)
), CTE2 AS
(
    SELECT
        YEAR(transaction_time) AS year
        ,MONTH(transaction_time) AS month
        ,CONCAT(YEAR(transaction_time), '-', MONTH(transaction_time)) AS
date
        ,SUM(charged_amount) AS charge_amount
        ,LAG(CONCAT(YEAR(transaction_time), '-', MONTH(transaction_time)))
OVER(PARTITION BY MONTH(transaction_time) ORDER BY
MONTH(transaction_time)) AS month_preyear
        ,LAG(SUM(charged_amount)) OVER(PARTITION BY
MONTH(transaction_time) ORDER BY MONTH(transaction_time)) AS
amount_month_preyear
    FROM CTE
    GROUP BY YEAR(transaction_time), MONTH(transaction_time)
)
SELECT
    date
    ,month
    ,charged_amount
    ,month_preyear
    ,amount_month_preyear
    ,FORMAT(charge_amount / amount_month_preyear - 1, 'p') AS pct_diff
FROM CTE2
WHERE amount_month_preyear IS NOT NULL
```

Output:



- January to March 2020:

Marked a significant surge compared to the same months in 2019, with percentage differences ranging from 250.74% to 400.32%. This substantial growth may be due to increased transactions or user adoption.

- April to June 2020:

Continued growth, though at a comparatively slower pace than earlier months. The percentage differences ranged from 87.36% to 192.08%. There might have been some stabilization or saturation in growth during this period.

- July to September 2020:

Sustained growth, but with a decreasing trend in the percentage differences. Ranging from 57.23% to 75.92%, the growth rate slowed down further. This suggests a potential slowdown in new user acquisition or transactional volumes.

- October to December 2020:

Showed the lowest percentage differences in revenue compared to the previous year, ranging from 21.14% to 31.27%. This could indicate a plateau or a more stable market for PayTM.

Overall, PayTM experienced remarkable growth in 2020 compared to 2019 across most months. The initial months of 2020 (January to April) witnessed substantial spikes, indicating exceptional revenue gains. From May onwards, the percentage differences gradually decreased, suggesting a normalization or stabilization of revenue growth. Despite a slightly lower percentage difference towards the end of the year, the revenue remained notably higher in December 2020 compared to December 2019, signifying sustained growth overall.

5. Revenue of each category contributes to the total over time:

SQL Query:

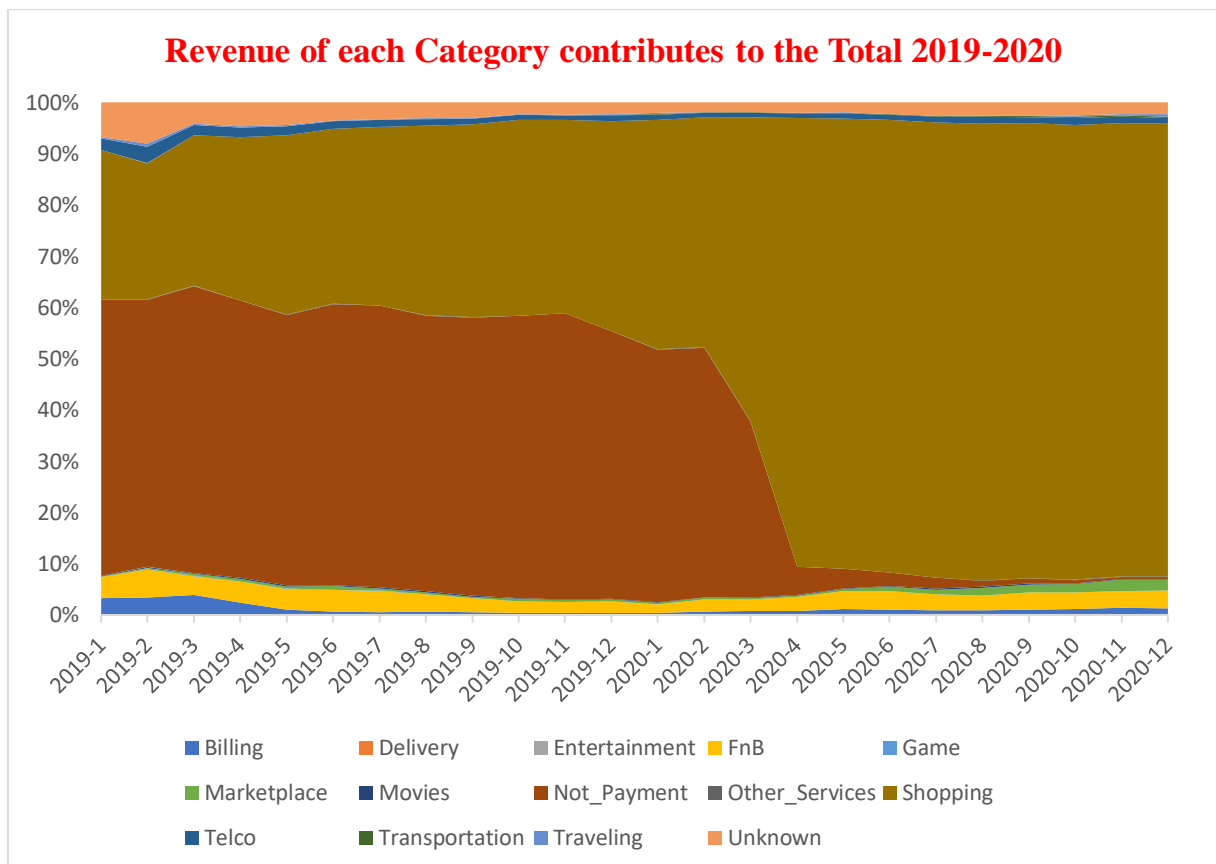
```
WITH category AS
(
    SELECT
        YEAR(transaction_time) AS year
        ,MONTH(transaction_time) AS month
        ,CONCAT(YEAR(transaction_time), '-', MONTH(transaction_time)) AS
date
        ,sce.category
        ,SUM(1.0*charged_amount) AS total_revenue
    FROM (SELECT * FROM fact_transaction_2019
          UNION
          SELECT * FROM fact_transaction_2020 ) AS fact
    LEFT JOIN dim_scenario AS sce
        ON fact.scenario_id = sce.scenario_id
    WHERE status_id = 1
    GROUP BY YEAR(transaction_time), MONTH(transaction_time), sce.category
), category_label AS
(
    SELECT
        year
        ,month
        ,date
        ,total_revenue
        ,SUM(CASE WHEN category = 'Billing' THEN total_revenue ELSE 0 END)
AS Billing
        ,SUM(CASE WHEN category = 'Delivery' THEN total_revenue ELSE 0
END) AS Delivery
        ,SUM(CASE WHEN category = 'Entertainment' THEN total_revenue ELSE
0 END) AS Entertainment
        ,SUM(CASE WHEN category = 'FnB' THEN total_revenue ELSE 0 END) AS
FnB
        ,SUM(CASE WHEN category = 'Game' THEN total_revenue ELSE 0 END) AS
Game
        ,SUM(CASE WHEN category = 'Marketplace' THEN total_revenue ELSE 0
END) AS Marketplace
        ,SUM(CASE WHEN category = 'Movies' THEN total_revenue ELSE 0 END)
AS Movies
        ,SUM(CASE WHEN category = 'Not Payment' THEN total_revenue ELSE 0
END) AS Not_Payment
        ,SUM(CASE WHEN category = 'Other Services' THEN total_revenue ELSE
0 END) AS Other_Services
        ,SUM(CASE WHEN category = 'Shopping' THEN total_revenue ELSE 0
END) AS Shopping
        ,SUM(CASE WHEN category = 'Telco' THEN total_revenue ELSE 0 END)
AS Telco
        ,SUM(CASE WHEN category = 'Transportation' THEN total_revenue ELSE
0 END) AS Transportation
        ,SUM(CASE WHEN category = 'Traveling' THEN total_revenue ELSE 0
END) AS Traveling
        ,SUM(CASE WHEN category IS NULL THEN total_revenue ELSE 0 END) AS
Unknown
)
```

```

FROM category
GROUP BY year, month, date
)
SELECT
    year
  , month
  , date
  , FORMAT(Billing / total_revenue, 'p') AS Billing_pct
  , FORMAT(Delivery / total_revenue, 'p') AS Delivery_pct
  , FORMAT(Entertainment / total_revenue, 'p') AS Entertainment_pct
  , FORMAT(FnB / total_revenue, 'p') AS FnB_pct
  , FORMAT(Game / total_revenue, 'p') AS Game_pct
  , FORMAT(Marketplace / total_revenue, 'p') AS Marketplace_pct
  , FORMAT(Movies / total_revenue, 'p') AS Movies_pct
  , FORMAT(Not_Payment / total_revenue, 'p') AS Not_Payment_pct
  , FORMAT(Other_Services / total_revenue, 'p') AS Other_Services_pct
  , FORMAT(Shopping / total_revenue, 'p') AS Shopping_pct
  , FORMAT(Telco / total_revenue, 'p') AS Telco_pct
  , FORMAT(Transportation / total_revenue, 'p') AS Transportation_pct
  , FORMAT(Traveling / total_revenue, 'p') AS Traveling_pct
  , FORMAT(Unknown / total_revenue, 'p') AS Unknown_pct
FROM category_label

```

Output:



- Dominant Categories:

Not_Payment and Shopping consistently constituted the bulk of revenue, contributing around 87% to 89%. Not_Payment and Shopping continued are the primary drivers of PayTM's revenue over both years, suggesting their sustained importance to the platform's income. In 2019 and the 1st quarter of 2020, Not_Payment accounted for nearly 60%, but when the epidemic broke out along with social distancing orders and lockdowns in major cities, the trend of people shopping through e-wallets and other forms of payment online increased significantly. Combined with many attractive year-end sales. All of this has stimulated demand, causing the Shopping segment's market share to increase sharply.

- Stable Minor Contributors:

Categories like FnB, Telco, Transportation, and Traveling maintained consistent, minor contributions, typically around 1% to 3%. PayTM's primary revenue drivers might heavily emphasize Not_Payment and Shopping. Consequently, resources, marketing, and strategic efforts may prioritize these core revenue-generating sectors. Certain services, although important, might represent niche or auxiliary aspects of PayTM's offerings, resulting in inherently lower contribution percentages to the overall revenue.

- Decreasing Categories:

Billing, Delivery, Entertainment, Game, Marketplace, Movies, and Other_Services remained relatively static or gradually decreased, having minimal impacts on the overall revenue. These categories might face intense competition from other platforms or services, making it challenging to gain or maintain market share, thereby affecting revenue growth. Additionally, shifts in technology could render certain services obsolete or less relevant, causing a decline in user adoption and revenue generation.

6. Customer segmentation by charged amount:

Classify customers with successful transactions into 4 groups:

Total transaction amount over 5,000,000 is "New Customer"

Total transaction amount over 10,000,000 is "Potential Customer"

Total transaction amount over 50,000,000 is "Loyal Customer"

And other is "Unknow"

Then calculate the proportion of each customer group.

SQL Query:

```
WITH customer_amount AS (  
    SELECT customer_id ,  
           SUM(CAST(charged_amount AS float)) as total_amount  
    FROM ( SELECT * FROM fact+_transaction_2019  
          UNION  
          SELECT * FROM fact_transation_2020) as fact  
    WHERE status_id = 1  
    GROUP BY customer_id  
)  
, customer_label AS (  
    SELECT *,  
           CASE WHEN total_amount > 50000000 THEN 'Loyal Customer'  
                WHEN total_amount > 10000000 THEN 'Potential Customer'  
                WHEN total_amount > 5000000 THEN 'New Customer'  
                ELSE 'unknow'  
           END AS label  
    FROM customer_amount  
)  
SELECT label  
    , COUNT(customer_id) as number_customer  
    , (SELECT COUNT(customer_id) FROM customer_amount) as total_customers  
    , FORMAT(COUNT(customer_id)* 1.0/ (SELECT COUNT(customer_id) FROM  
customer_amount) , 'p') as pct  
FROM customer_label  
GROUP BY label
```

Output:

	label	number_customer	total_customers	pct
1	unknown	50316	62391	80.65%
2	Potential customer	4930	62391	7.90%
3	New customer	3268	62391	5.24%
4	Loyal customer	3877	62391	6.21%

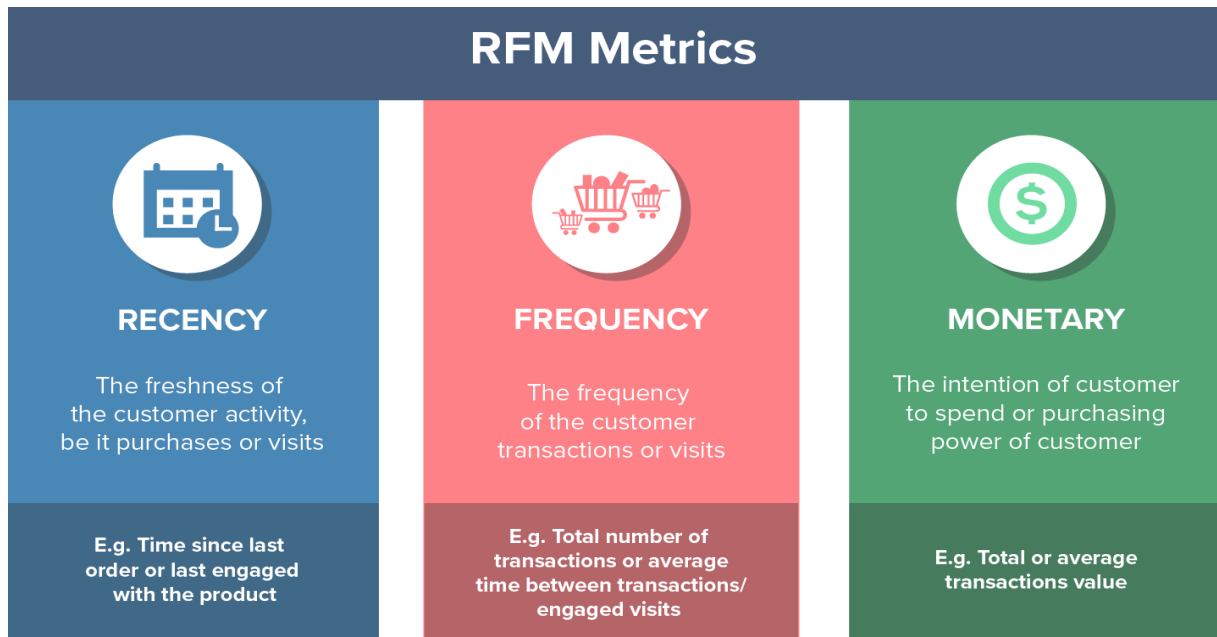
Although accumulated revenue increased impressively, PayTM's main customer group is still a group of small customers with low value transactions (under 5000000). This is a point that needs to be overcome and at the same time opens up opportunities for the company to exploit this customer group, converting to Potential Customer group because the room for small customers is still very large (more than 80%).

The relatively low percentages for "New," "Potential," and "Loyal" customers could hint at challenges in retaining or upgrading customers to higher transaction tiers. Moreover, it might indicate an opportunity for incentivizing higher spending or fostering loyalty programs to increase the number of customers in these categories. Understanding why a vast majority fall into the "Unknow" category could drive strategies to engage and encourage increased spending among this segment.

The proportion of the "Unknow" category suggests a need for deeper analysis of customer behaviors, potential modifications to segmentation criteria, and strategic initiatives to foster customer retention and growth in higher transaction categories. This analysis could enhance customer engagement and drive revenue growth by tapping into the diverse customer base more effectively. Therefore, to segment customers into more detailed groups. We're going to customer segmentation by RFM Model.

7. Customer segmentation by RFM Model:

Recency, frequency, monetary value (RFM) is a model used in marketing analysis that segments a company's consumer base by their purchasing patterns or habits. It assigns a score of 1 to 5 (from best to worst) for customers in each of the three categories.



RFM is then used to identify a company's or an organization's best customers by measuring and analyzing spending habits to improve low-scoring customers and maintain high-scoring ones. After each point is assigned, customers will be segmented into groups as below:

Segmentation	R_tier	F_tier	M_tier
Almost lost	3	1	1,2,3,4
Best customers	1	1	1
Big Spender	1,2	1,2,3	1
Hibernating	3,4	1	1,2,3,4
Lost Bad customers	3,4	3,4	1,2,3,4
Lost customers	3,4	2	1,2,3,4
Loyal customers	1	1	2,3,4
New customers	1,2	4	1,2,3,4
Potential Loyalist	1,2	2,3	2,3,4

SQL Query:

```
WITH customer AS (
    SELECT customer_id
        ,DATEDIFF(day,MAX(transaction_time),'2020-12-31') as recency
        ,COUNT(transaction_id) as frequency
        ,SUM( 1.0 * charged_amount) as monetary
    FROM ( SELECT * FROM fact_transaction_2019
        UNION
        SELECT * FROM fact_transaction_2020)
    WHERE status_id = 1
    GROUP By customer_id
)
, rfm_rank AS (
    SELECT *
        ,PERCENT_RANK () OVER (ORDER BY recency ASC ) as r_rank
        ,PERCENT_RANK () OVER (ORDER BY frequency DESC ) as
        f_rank
        ,PERCENT_RANK () OVER (ORDER BY monetary DESC ) as m_rank
    FROM customer
)
, rfm_table AS (
    SELECT *
        ,CASE WHEN r_rank > 0.75 THEN 4
            WHEN r_rank > 0.5 THEN 3
            WHEN r_rank > 0.25 THEN 2
            ELSE 1
            END AS r_tier
        ,CASE WHEN f_rank > 0.75 THEN 4
            WHEN f_rank > 0.5 THEN 3
            WHEN f_rank > 0.25 THEN 2
            ELSE 1
            END AS f_tier
        ,CASE WHEN m_rank > 0.75 THEN 4
            WHEN m_rank > 0.5 THEN 3
            WHEN m_rank > 0.25 THEN 2
            ELSE 1
            END AS m_tier
    FROM rfm_rank
)
, rfm_score AS (
    SELECT *
        ,CONCAT(r_tier, f_tier, m_tier) as rfm_score
    FROM rfm_table
)
, segment AS (
    SELECT *,
        CASE
            WHEN rfm_score = '111' THEN 'Best Customers'
            WHEN rfm_score LIKE '[3-4][3-4][1-4]' THEN 'Lost Bad Customers'
            WHEN rfm_score LIKE '[3-4]2[1-4]' THEN 'Lost Customers'
            WHEN rfm_score LIKE '31[1-4]' THEN 'Almost Lost Customers'
```

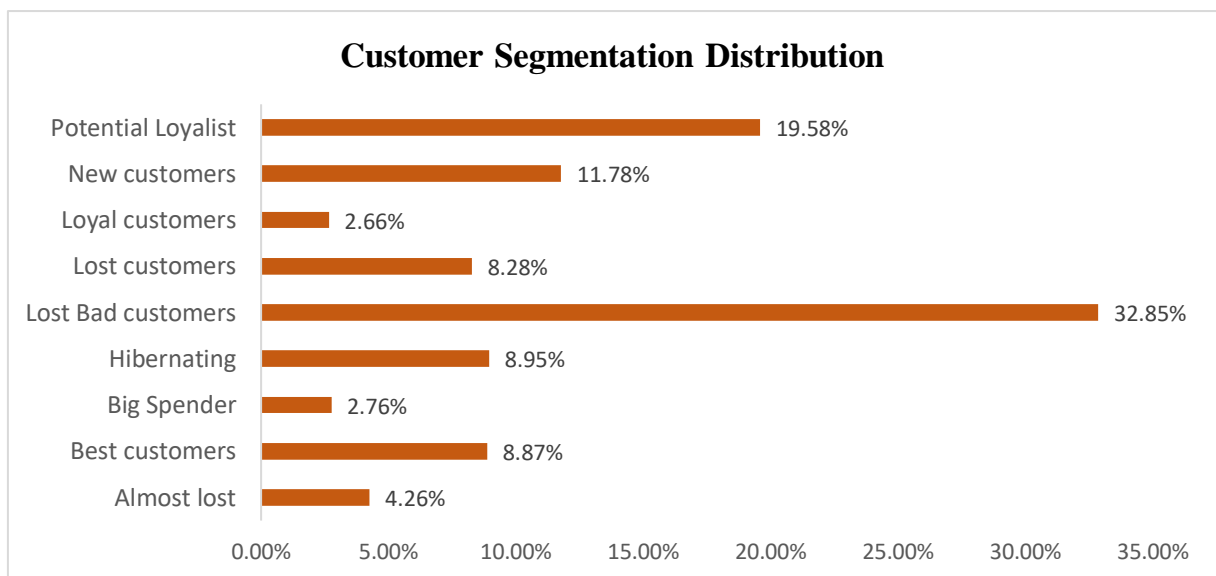
```

        WHEN rfm_score LIKE '[1-2][1-3]1' THEN 'Big Spenders'
        WHEN rfm_score LIKE '11[2-4]' THEN 'Loyal Customers'
        WHEN rfm_score LIKE '[1-2]4[1-4]' THEN 'New Customers'
        WHEN rfm_score LIKE '[3-4]1[1-4]' THEN 'Hibernating'
        WHEN rfm_score LIKE '[1-2][2-3][2-4]' THEN 'Potential
Loyalists'
        ELSE 'Unknown'
        END as cus_segment
    )

SELECT cus_segment
      ,COUNT(customer_id) as number_customer
      ,SUM(COUNT(customer_id)) OVER() AS total_customers
      ,FORMAT (COUNT(customer_id) * 1.0 / SUM(COUNT(customer_id)) OVER(),
'p') AS pct
FROM segment
GROUP BY cus_segment

```

Output :



1. Lost Bad Customers (32.85%) & Lost Customers (8.28%):

A significant portion of customers falls into these categories. This persistent high portion could stem from various issues, including dissatisfaction with product or service quality, competition offering more appealing alternatives, or inadequate personalized experiences. Additionally, poor customer support, lack of engagement initiatives, or failing to adapt to evolving customer needs might contribute to this disengagement. To tackle this, businesses need to proactively collect customer feedback, employ targeted

re-engagement strategies, and prioritize enhancing the overall customer experience. By addressing these factors, companies can aim to mitigate customer churn, strengthen relationships, and foster a more loyal customer base, consequently reducing the prevalence of customers falling into these disengaged segments.

2. Best Customers (8.87%) & Big Spender (2.76%):

These segments represent high-value customers. Focusing on retaining and nurturing their loyalty through exclusive offers or personalized experiences can be beneficial for revenue growth. These customers remain loyal due to positive past experiences, tailored services, and the brand's consistent delivery of quality products or services. Their sustained loyalty and willingness to spend more are a testament to the business's ability to provide exceptional value and meet their specific needs. To maintain and further benefit from these segments, businesses must continue offering personalized experiences, exclusive rewards, and consistent communication. By focusing on reinforcing these relationships, soliciting feedback, and consistently delivering exceptional service, companies can continue to cultivate these high-value segments, ensuring their lasting presence within the customer base.

3. Potential Loyalists (19.58%) & New Customers (11.78%):

These groups hold potential for growth. Strategies aimed at converting new customers into loyal ones can optimize future revenue. Their presence suggests a promising avenue for nurturing long-term relationships and fostering loyalty. On the other hand, the "New Customers" segment comprises fresh additions to the customer base, drawn in through various marketing efforts or market expansions. Their considerable portion reflects the potential for business growth and the success of initiatives aimed at attracting new clientele. To leverage these segments effectively, businesses can implement dedicated onboarding programs for new customers, ensuring positive initial experiences. Additionally, personalized engagement initiatives can be employed to cultivate deeper connections with potential loyalists, converting their interest into sustained loyalty. By understanding their needs, gathering feedback, and tailoring strategies accordingly, companies can capitalize on these segments,

transforming them into loyal, engaged, and valuable customer cohorts, driving future growth and success.

4 .Loyal Customers (2.66%) & Almost Lost (4.26%):

Retaining these customers is essential. They might be at risk or not fully engaged, requiring targeted efforts to prevent potential churn. Despite their smaller portion, the presence of customers in this category underscores the significance of proactive retention strategies. This lower percentage might indicate successful intervention efforts to prevent these customers from transitioning into more critical loss segments. Businesses should prioritize maintaining relationships with existing loyal customers, offering personalized experiences and exclusive benefits. Simultaneously, targeted strategies to re-engage customers in the "Almost Lost" category are vital to prevent further attrition and preserve the overall customer base. Monitoring, timely intervention, and tailored approaches are essential for nurturing and fortifying these segments over time.

5. Hibernating (8.95%):

This segment consists of inactive customers. tailored communications, or incentives might reignite their interest and bring them back into the active customer base.

III. RECOMMENDATION

Based on sales performance results, I propose 4 main solution groups for PayTM's main problems as below:

1. Partnerships and Service Expansion:

- Form strategic partnerships with various businesses, such as e-commerce platforms, travel agencies, or utility service providers, to offer integrated services or exclusive deals within the PayTM app.
- Expand service offerings by introducing new features like insurance, investment opportunities, or partnerships with popular retailers to provide exclusive discounts or cashback for PayTM users.
- Collaborate with local businesses or explore tie-ups with international brands to diversify offerings and attract a broader user base.

2. Innovation in Payment Technology:

- Invest in R&D to innovate and improve the existing payment infrastructure, focusing on enhancing security, speed, and user convenience.
- Explore emerging technologies like contactless payments, biometrics, or QR code innovations to make transactions more seamless and secure.
- Develop innovative payment solutions catering to specific industries or sectors, such as facilitating easy payments for small businesses or introducing new payment methods for specific demographics.

3. Customer Retention and Loyalty Programs:

- Implement a comprehensive loyalty program that rewards frequent users, encourages repeat transactions, and incentivizes engagement within the PayTM ecosystem.
- Offer personalized deals, discounts, or cashback rewards tailored to individual user preferences and spending behaviors.
- Utilize data analytics to segment customers based on their transaction history and behavior, enabling targeted marketing campaigns and personalized offers to increase customer retention.

4. Market-Specific Expansion Strategies:

- Conduct thorough market research to identify untapped demographics or geographical areas with high growth potential for digital payments.
- Tailor marketing strategies and service offerings to cater specifically to these identified markets, addressing their unique needs and preferences.
- Develop region-specific campaigns, language support, or cultural adaptations to resonate better with diverse user segments, fostering increased adoption and user engagement.
- Collaborate with local influencers, KOLs or community leaders to establish credibility and trust within these new markets, facilitating faster user acquisition and market penetration.