📊 PhonePe Transaction Insights Analysis
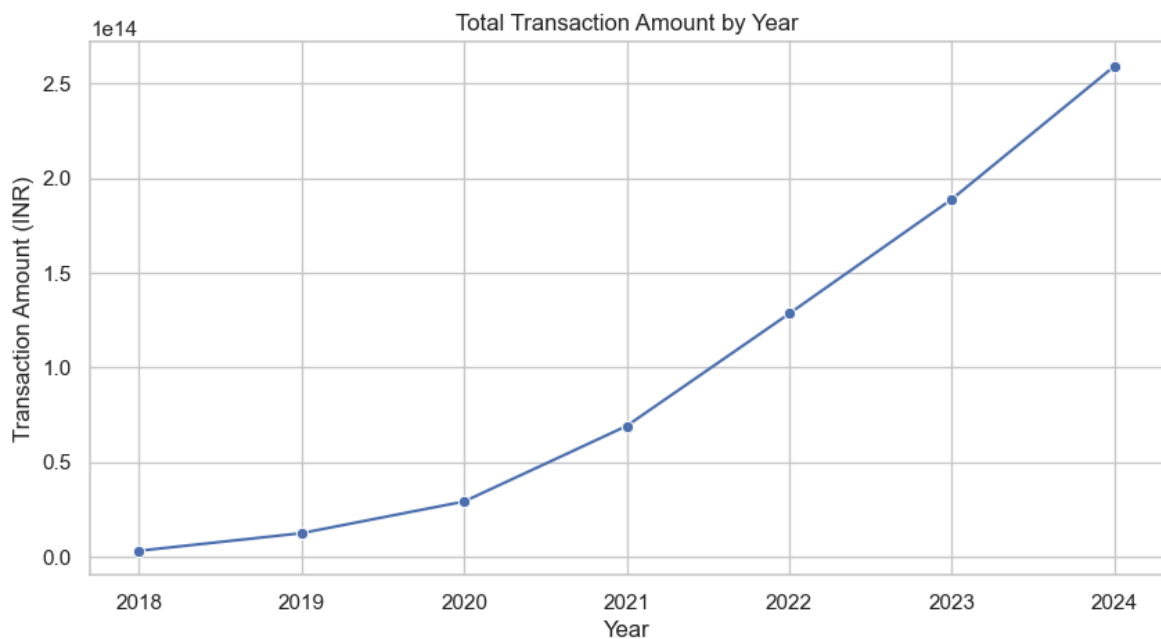
In [1]:
```python
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

sns.set(style='whitegrid')
```

In [2]:
```python
# Load datasets
a_transaction = pd.read_csv("data/aggregated_transaction.csv")
a_user = pd.read_csv("data/aggregated_user.csv")
t_transaction = pd.read_csv("data/top_transaction.csv")
m_transaction = pd.read_csv("data/map_transaction_hover.csv")
```
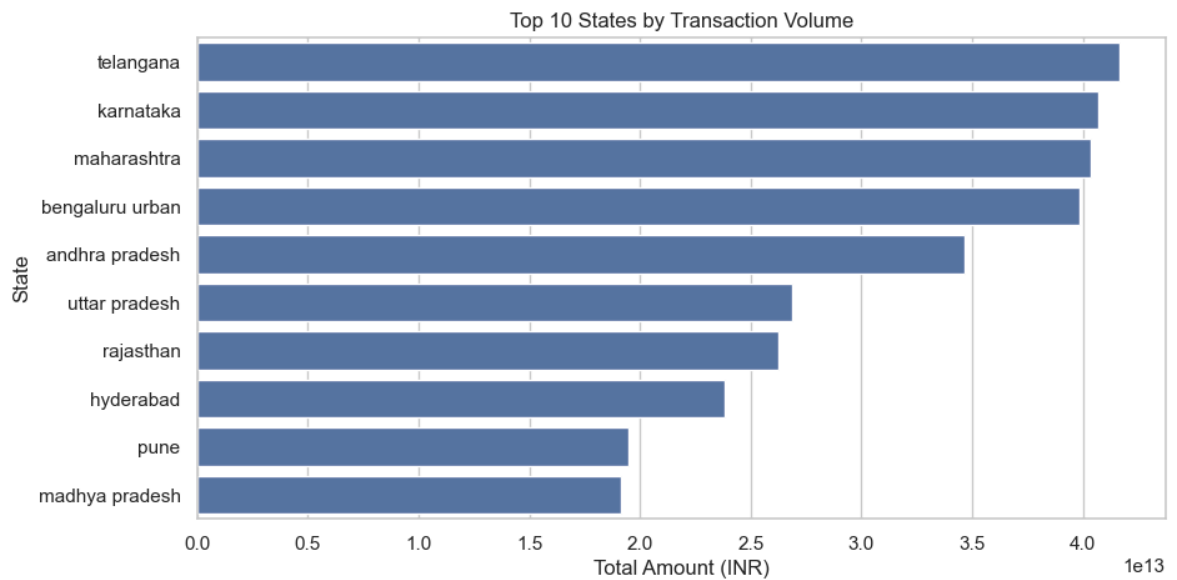
In [3]:
```python
agg_by_year = a_transaction.groupby('year')[['transaction_count', 'transaction_a

plt.figure(figsize=(10,5))
sns.lineplot(data=agg_by_year, x='year', y='transaction_amount', marker='o')
plt.title("Total Transaction Amount by Year")
plt.xlabel("Year")
plt.ylabel("Transaction Amount (INR)")
plt.show()
```
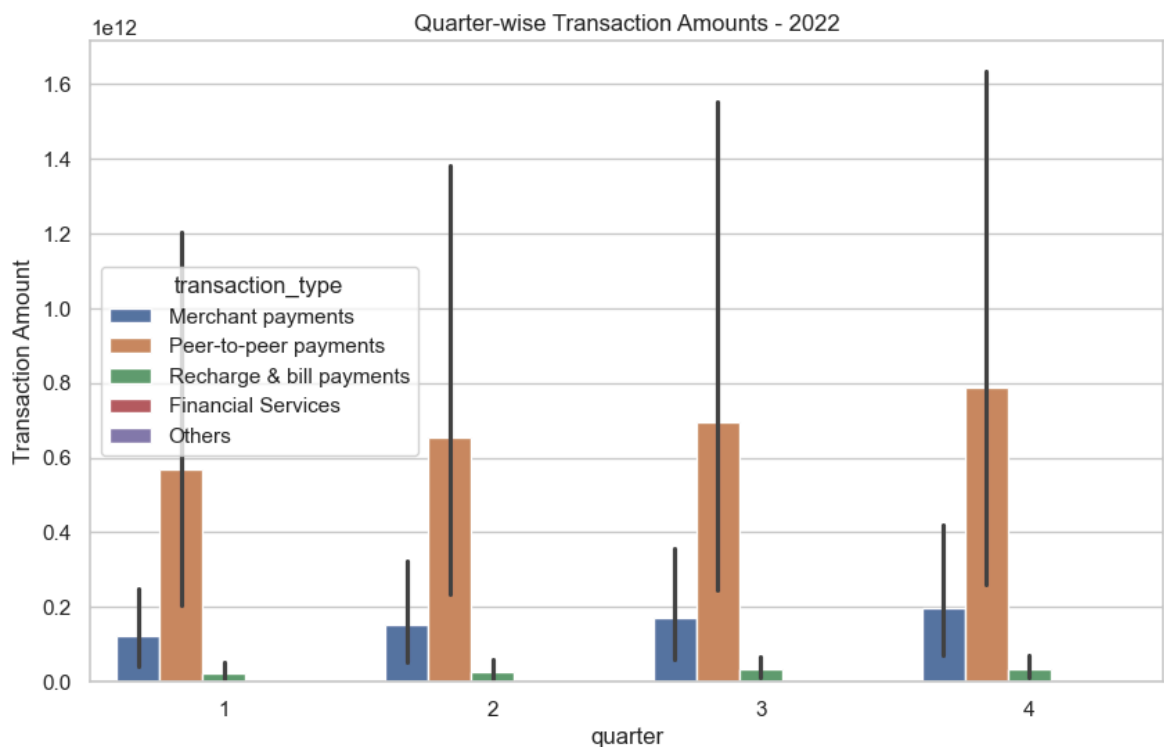

In [4]:
```python
top_states = t_transaction.groupby('entity_name')[['count', 'amount']].sum().res
top_states = top_states.sort_values(by='amount', ascending=False).head(10)

plt.figure(figsize=(10,5))
sns.barplot(data=top_states, y='entity_name', x='amount')
plt.title("Top 10 States by Transaction Volume")
plt.xlabel("Total Amount (INR)")
plt.ylabel("State")
plt.show()
```

Top 10 States by Transaction Volume
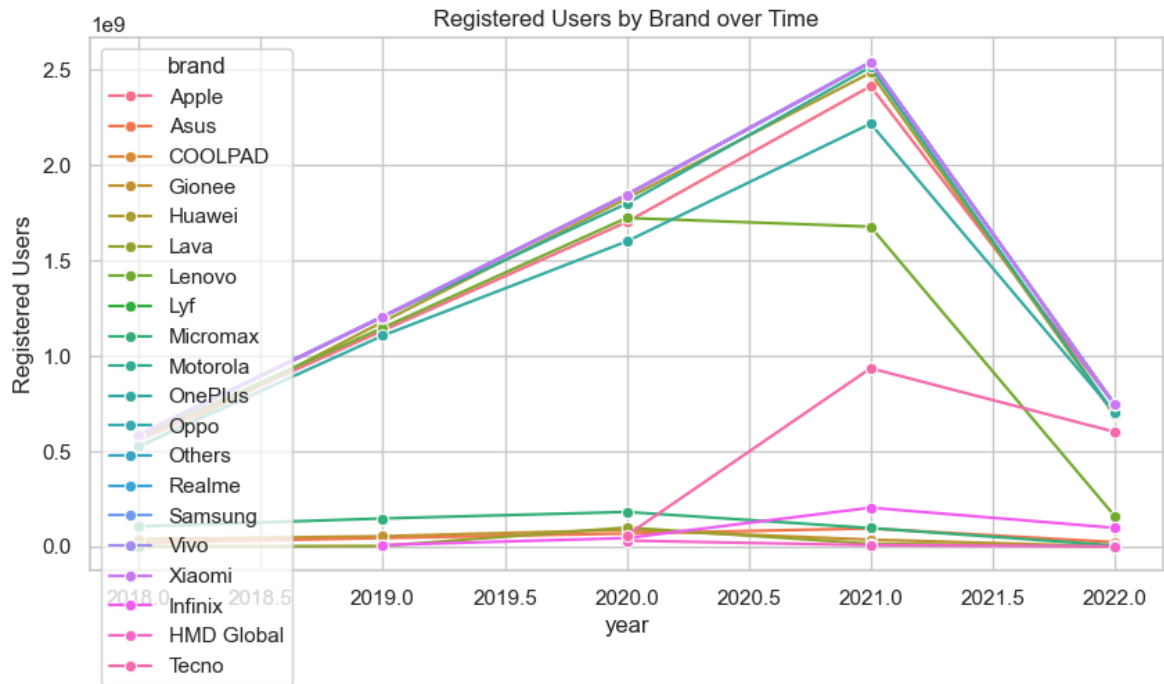


```
In [5]: yearly_data = a_transaction[a_transaction['year'] == 2022]

        plt.figure(figsize=(10,6))
        sns.barplot(data=yearly_data, x='quarter', y='transaction_amount', hue='transact
        plt.title("Quarter-wise Transaction Amounts - 2022")
        plt.ylabel("Transaction Amount")
        plt.show()
```



```
In [6]: user_brand = a_user.groupby(['year', 'brand'])['registeredUsers'].sum().reset_in

        plt.figure(figsize=(10,5))
        sns.lineplot(data=user_brand, x='year', y='registeredUsers', hue='brand', marker
        plt.title("Registered Users by Brand over Time")
        plt.ylabel("Registered Users")
        plt.show()
```

Registered Users by Brand over Time

```
In [7]: map_sample = m_transaction[(m_transaction['year'] == 2022) & (m_transaction['qua
        map_sample[['state_name', 'amount', 'count']].sort_values(by='amount', ascending
```

Out[7]:

	state_name	amount	count
707	telangana	2.978253e+12	1819506832
692	maharashtra	2.210471e+12	1688775272
705	karnataka	1.904517e+12	1378910371
18006	telangana	1.753799e+12	1133829812
697	rajasthan	1.456957e+12	865574848
688	andhra pradesh	1.424725e+12	690017077
686	uttar pradesh	1.376379e+12	836369071
687	madhya pradesh	1.303000e+12	898828268
9164	karnataka	1.092079e+12	876647100
703	bihar	9.360121e+11	517084649

📌 Insights Summary

- **Massive Growth**: Transaction volume has grown rapidly year over year, especially post-2020.
- **Top States**: Maharashtra, Karnataka, and Uttar Pradesh consistently rank highest.
- **Strong Q4 Trends**: Many transaction types peak in the 4th quarter each year.
- **User Growth**: Reliance Jio and Samsung dominate the user base.
- **Map View**: States like Maharashtra and Karnataka dominate financial activity.