Mapping Cultural Participation Inequality Across Brazil

How region, education, and socioeconomic structure align with cultural engagement

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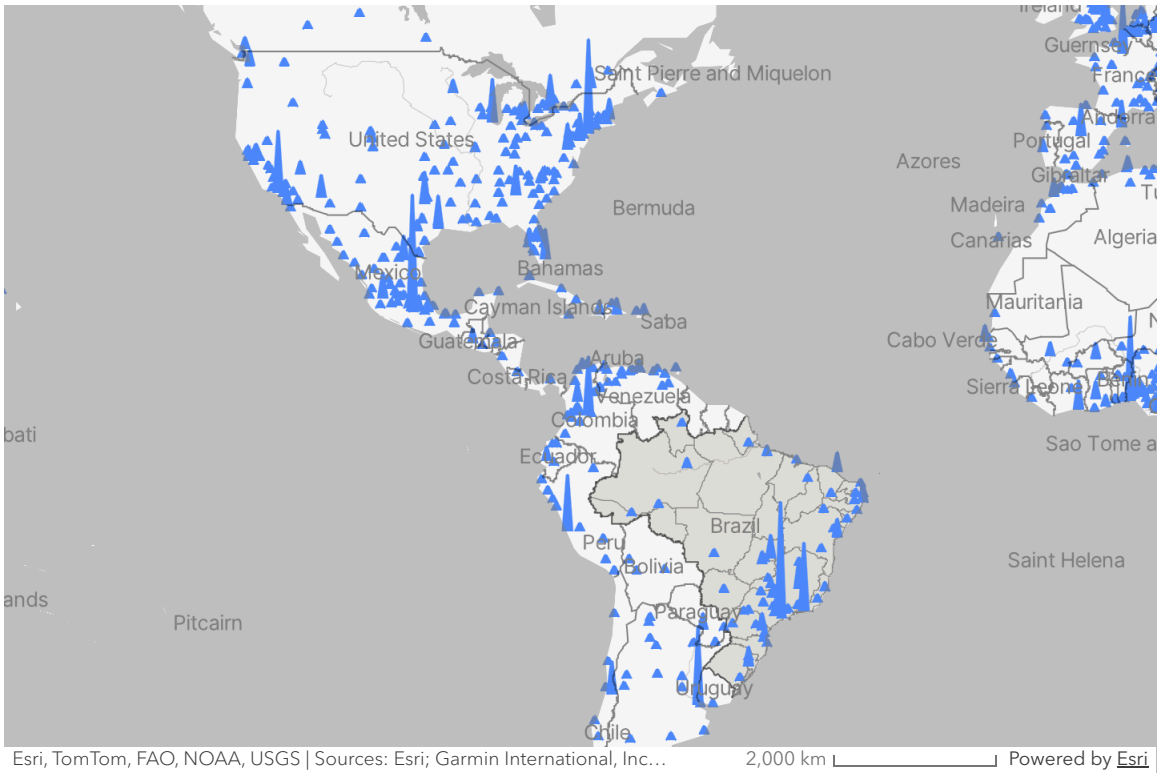
Introdution

This project analyzes how cultural participation varies across Brazil's 27 capital cities and how those differences align with socioeconomic class and education levels.

The unit of analysis is the capital city. The population universe includes residents aged 16 and older, consistent with the survey design. All indicators are weighted estimates derived from the 2024 ***Cultura nas Capitais*** survey (19,500 interviews).

Rather than focusing on a single activity, this analysis measures participation intensity across 14 cultural activities. By mapping city-level participation rates and comparing them with education and class structure, the project identifies spatial patterns of inequality that are not visible in tabular summaries alone.

World Population



Brazil is the largest country in Latin America and one of the most populous in the world, with over 200 million residents.

This scale matters analytically. Cultural participation in São Paulo or Rio de Janeiro reflects patterns within metropolitan regions that are economically and demographically comparable to global cities. At the same time, Brazil's regional disparities are substantial.

The map above situates Brazil in the global population context. The analysis that follows focuses specifically on capital-city residents aged 16 and older, allowing consistent comparison across cities and macro-regions.

Global Recognition

Brazilian cinema has recently gained international visibility, highlighting the global reach of contemporary Brazilian cultural production. However, internationally recognized films account for only a small portion of everyday cultural engagement in Brazilian cities.

High-profile cultural exports often shape external perceptions of Brazil. The analysis below shifts focus from global recognition to everyday participation, using survey data from the 2024 Cultura nas Capitais study to examine how residents engage with cultural activities across Brazil's capitals.

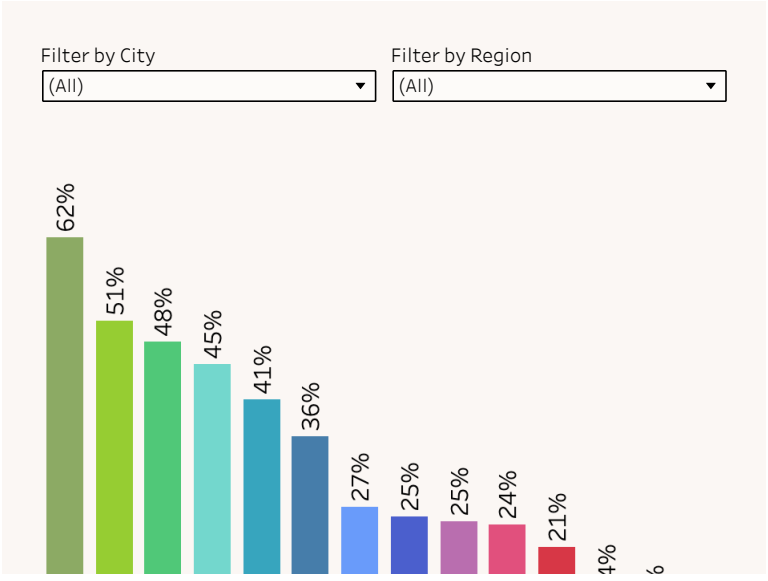
Examples of recent Brazilian films that received international recognition.

Activities Surveyed: Participation in the Last 12 Months

Respondents were asked whether they had participated in each of 14 cultural activities:

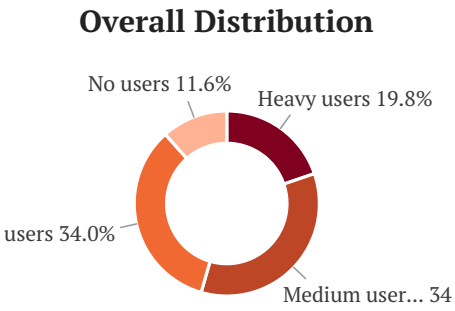
- in the previous 12 months,
- more than 12 months ago, or
- never.

The chart below shows the weighted percentage of residents in each capital who reported participating in each activity within the previous 12 months. These percentages reflect recent participation and allow comparison across activities using a consistent time reference.



Participation Index

To measure cultural participation, this project constructs an intensity index based on 14 reported activities. Each respondent receives a score equal to the number of activities performed in the past 12 months. Respondents are grouped as:

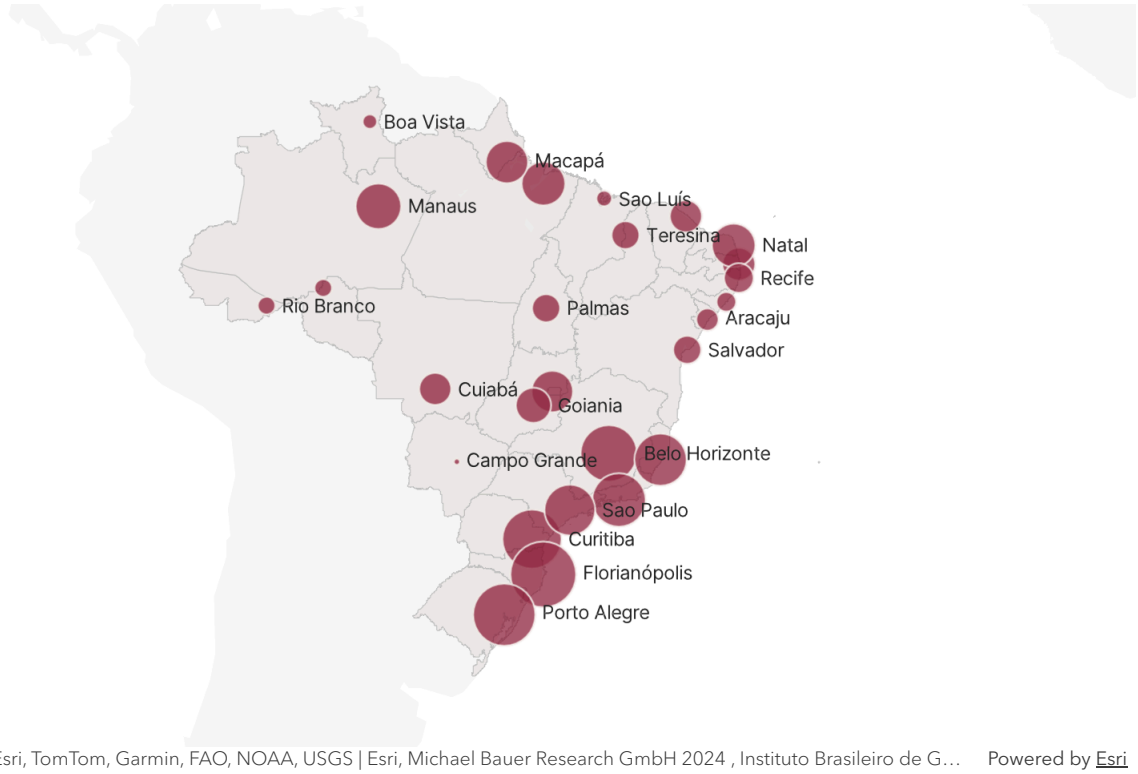


- **Heavy users:** 8–14 activities
- **Medium users:** 4–7 activities
- **Low users:** 1–3 activities
- **No users:** 0 activities

This index captures the degree of engagement rather than participation in any single activity. It allows comparison across cities and regions using a standardized measure.

Region

Cultural Participation Is Spatially Uneven



Heavy Users

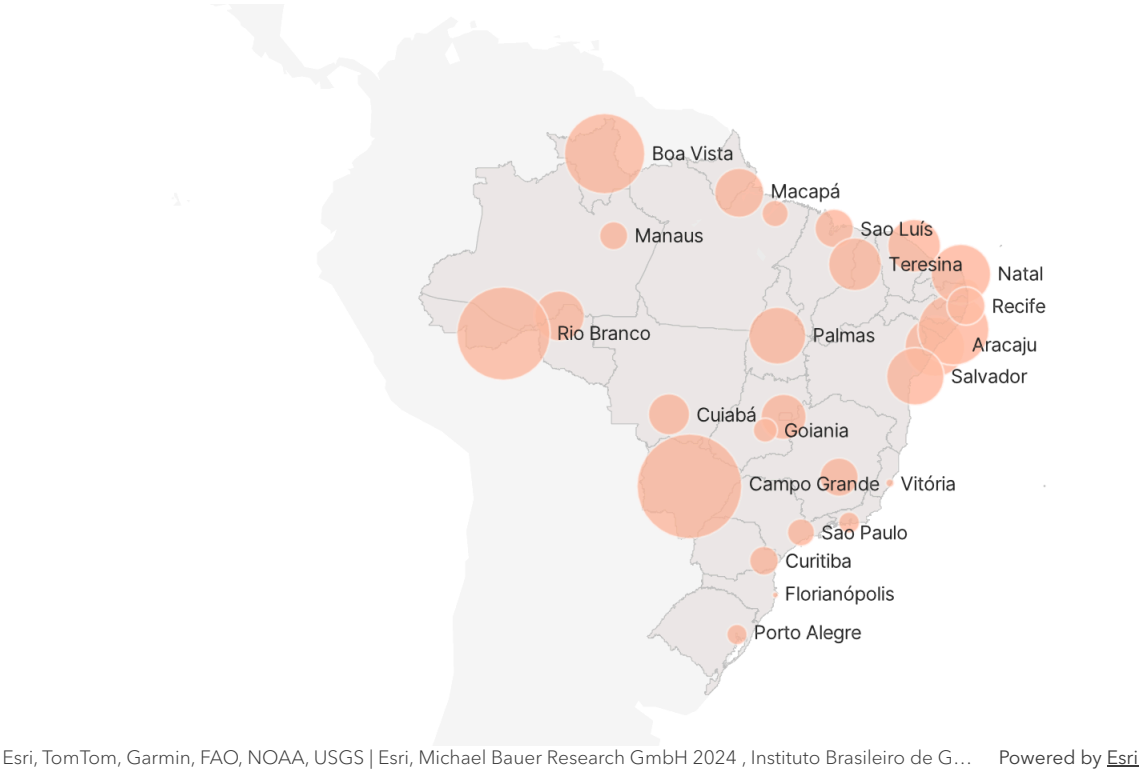
Where Intense Participation is Concentrated

The map of heavy users shows a clear regional concentration. A higher percentage of heavy users is found in the capitals of the

South and Southeast, including São Paulo, Rio de Janeiro, Belo Horizonte, Curitiba, Florianópolis, and Porto Alegre.

Brasília in the Center-West shows a moderate level. Most capitals in the North and parts of the Northeast show lower percentages of heavy users.

This indicates that intense cultural participation clusters geographically rather than being evenly distributed nationwide.



No Users

Where Cultural Participation Is Minimal

The map of no users reinforces the same regional pattern. Capitals in the **North and Northeast** show higher percentages of residents who did not participate in any of the 14 activities in the previous year.

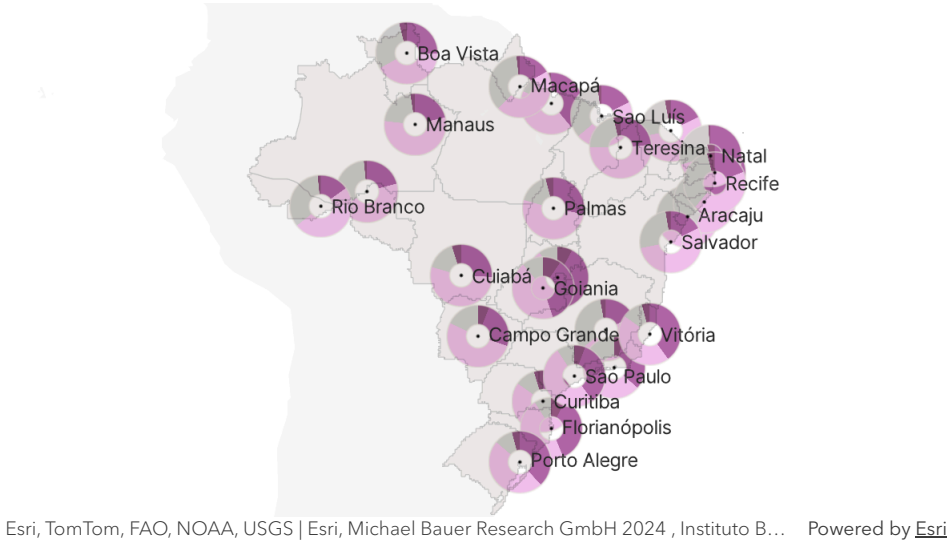
In contrast, most capitals in the South and Southeast show lower shares of non-participation.

Taken together, the heavy-user and no-user maps reveal a consistent spatial divide in cultural engagement.

Socioeconomic Class

The socioeconomic distribution map shows that capitals in the South and Southeast have higher percentages of residents in Classes A and B. In many Northern capitals, a larger percentage of adults are in Classes C and D/E.

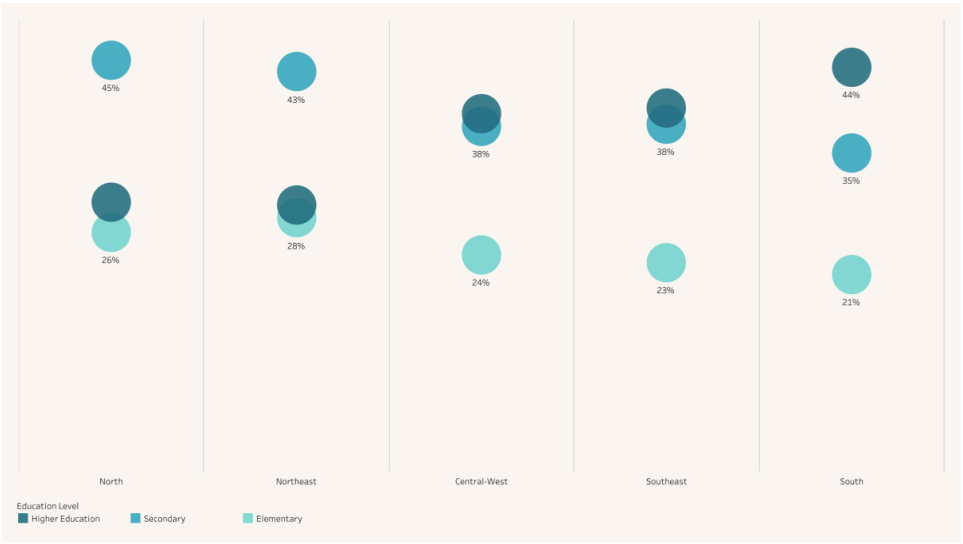
Cities with higher concentrations of middle- and upper-class residents also tend to show higher participation intensity. This pattern does not establish causation. However, it demonstrates alignment between income distribution and cultural engagement at the city level.



Socioeconomic classes distribution per city

Education

Education shows strong structural alignment with participation.

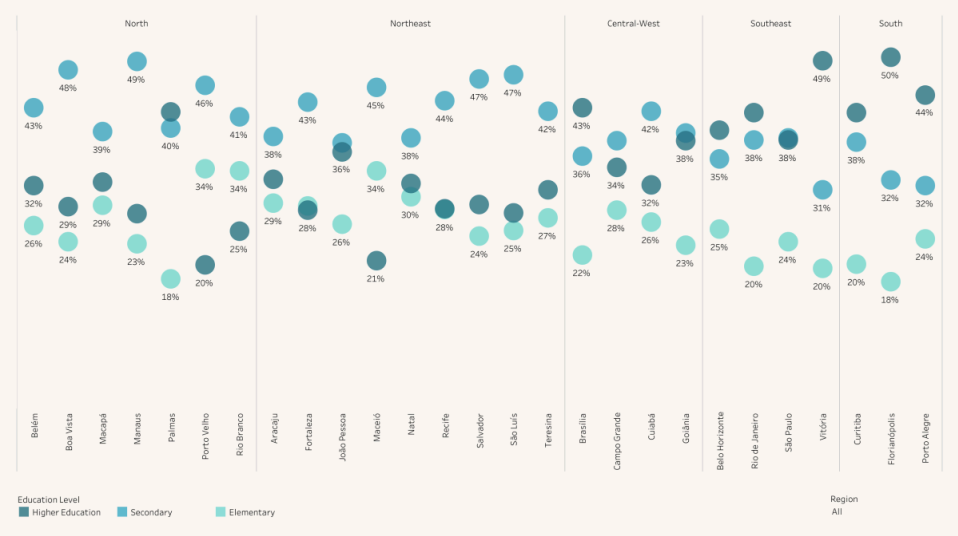


Education by Region link

Education by Region

Regional education patterns follow a similar structure. In the

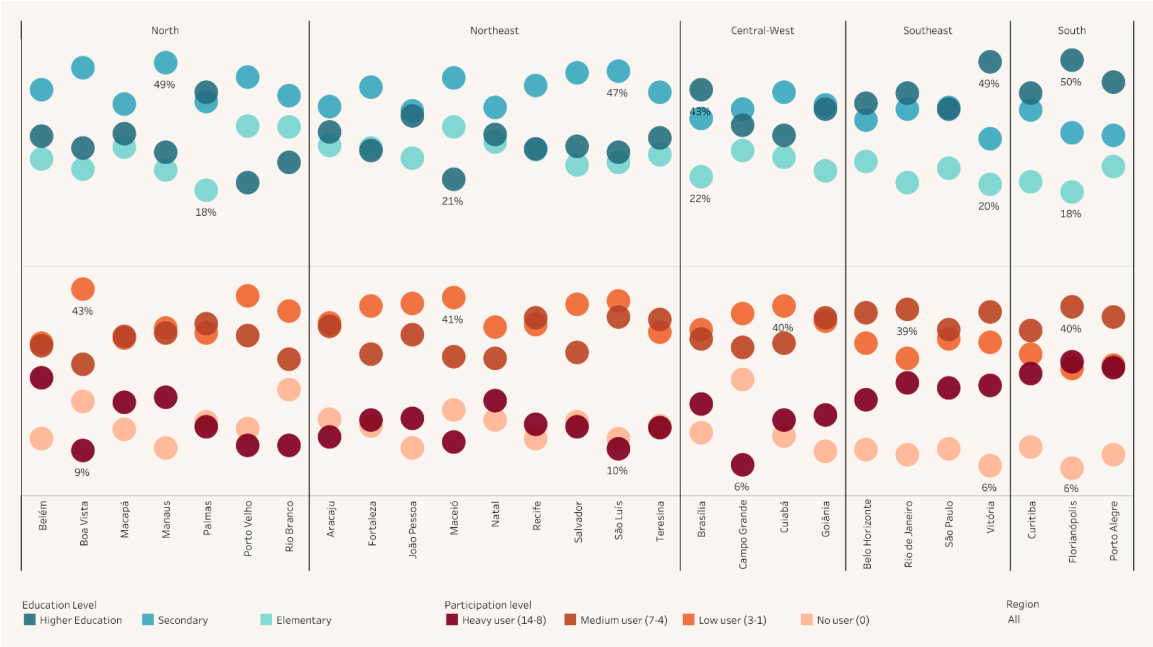
South and Southeast, larger percentages of adults have completed higher education. In the North and Northeast, larger percentages have completed only primary or secondary education. And the Center-West falls between these two groups.



Education by City link

Education by City

At the city level, there are outliers. For example, Brasília and Palmas have elevated shares of higher education than nearby capitals.When comparing education levels across participation groups, cities with large proportions of residents holding higher education tend to show higher percentages of heavy and medium users. Conversely, cities with higher shares of lower educational attainment show higher proportions of low and no users.These results do not prove that education causes cultural participation. However, they demonstrate consistent spatial alignment between schooling levels and cultural engagement across Brazil's capitals.



Education and Participation groups by City link

Conclusion

This analysis identifies three consistent findings:

1. **Cultural participation is geographically concentrated**, with higher intensity in South and Southeast capitals.
2. **Socioeconomic structure aligns with participation patterns**, as cities with higher class concentration show higher engagement.
3. **Education exhibits strong structural alignment with participation intensity**, particularly at the city level.

Cultural engagement is not evenly distributed across Brazil's capitals. Instead, it follows broader structural patterns of inequality. These maps are exploratory tools designed to surface spatial relationships. They highlight structural alignment but do not test causal mechanisms.

Limitations

Spatial scope

The study is limited to residents of Brazil's 27 capital cities and does not include smaller municipalities or rural populations. Therefore, the findings are not generalizable to the entire country.

Temporal scope

The data are cross-sectional, reflecting only the year 2024.

Consequently, the analysis does not capture longitudinal trends or temporal changes in participation.

Measurement limits
Participation is self-reported and defined as engagement within the previous 12 months. The survey does not assess the frequency, intensity, or qualitative depth of engagement. Additionally, it excludes informal, unlisted, or emerging cultural practices beyond the 14 predefined activities.

Index construction
The participation intensity index measures the range of engagement, as indicated by the number of reported activities.

Analytical scope
The study is exploratory and descriptive in nature. While consistent structural alignment is observed between education, socioeconomic classification, and participation, multivariate modeling and causal inference are addressed in a separate project on GitHub. The observed associations may reflect broader structural inequalities rather than direct causal effects.

Credits

This analysis was created by **Luciana Junqueira** using microdata from the 2024 ***Cultura nas Capitais*** survey (19,500 in-person interviews with residents aged 16+ across Brazil's 27 capitals).

All indicators in the maps and charts are **weighted estimates**. Survey weights were applied prior to aggregation so that city-level results reflect each capital's adult population structure rather than raw interview counts. For each capital, weighted percentages were computed for participation intensity groups (no, low, medium, heavy users), socioeconomic classification, and education levels.

Data modeling and aggregation were conducted in **R**, producing a city-level analytical table that was joined to a capital point feature layer in **ArcGIS Online** for spatial visualization. Administrative boundaries and basemaps were sourced from the ArcGIS Living Atlas of the World. Population context uses United Nations estimates. The narrative and visualizations were assembled in ArcGIS StoryMaps.

This project was developed as part of a GIS course at Santa Monica College.

Full methodology and reproducible workflow documentation are available in the project **GitHub** repository.