



World Happiness Report

Information Visualization 1º Project

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01

Phenomena

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Introduction to WHR

- 1. Purpose of the Report:** Measures and compares happiness and well-being across countries.
- 2. Global Coverage:** Conducted in over 150 countries.

Quality of life

The report measures quality of life by looking at diverse well-being factors—not just economic data. It includes social support, health, freedom, and trust, providing a full view of what influences happiness.

Significance: A collaboration involving Gallup, Oxford's Wellbeing Research Centre, and the UN's Sustainable Development Solutions Network, aiming to foster policies that improve life satisfaction.



Happiness Indicators

Economic Stability

GDP per capita as a measure of financial security and economic well-being.

Freedom of Choice

The perceived freedom individuals feel to make life decisions.

Social Support

Strong social networks and the availability of support systems when needed.

Generosity

The sense of community and willingness to help others, measured through charitable donations and acts.

Life Expectancy

Health metrics reflecting the general health of the population, represented by life expectancy.

Perceptions of Corruption

Trust in institutions and governance, with lower corruption contributing to higher happiness.

02

Data Received

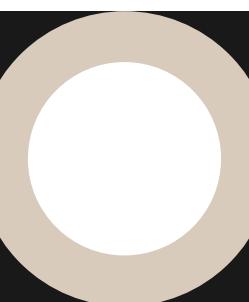
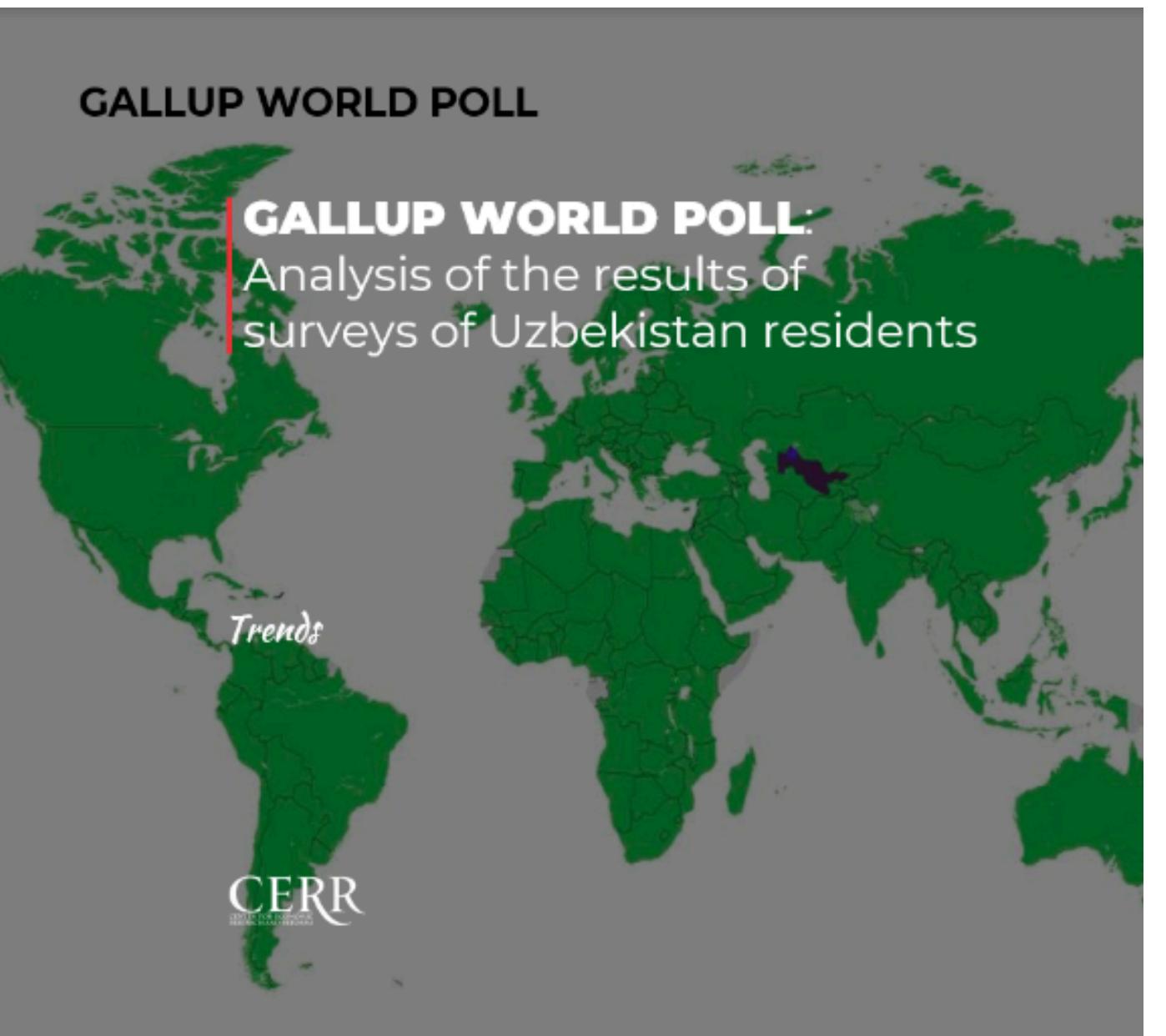
Data Sources

Main Sources

In collaboration with organizations like the UN, data collected through the Gallup World Poll provides a broad perspective on global well-being.

Methology

Life satisfaction data is gathered using the Cantril Ladder, where respondents rate their lives on a scale from 0 (worst possible) to 10 (best possible). This question, along with others related to well-being, is used to calculate national happiness scores.



Data Structure (Table & Fig. 2.1)

Fig 2.1

Country Name	Ladder Score	Log GDP per Capita	Social Support	Healthy Life Expect	Generosity	Perc. of Corruption	Freedo m.. Life Choices
Finland	7,741	1,844	1,527	0,695	0,142	0,546	0,859
Denmark	7,583	1,908	1,520	0,699	0,204	0,548	0,859

Table 2.1

Country Name	Year	Ladder Score	Log GDP per Capita	Social Support	Healthy Life Expect	Generosity	Perc. of Corruption	Freedo m.. Life Choices
Finland	2023	7,699	10,808	0,947	71,300	-0,001	0,185	0,943
Finland	2022	7,729	10,811	0,974	71,225	0,101	0,190	0,959

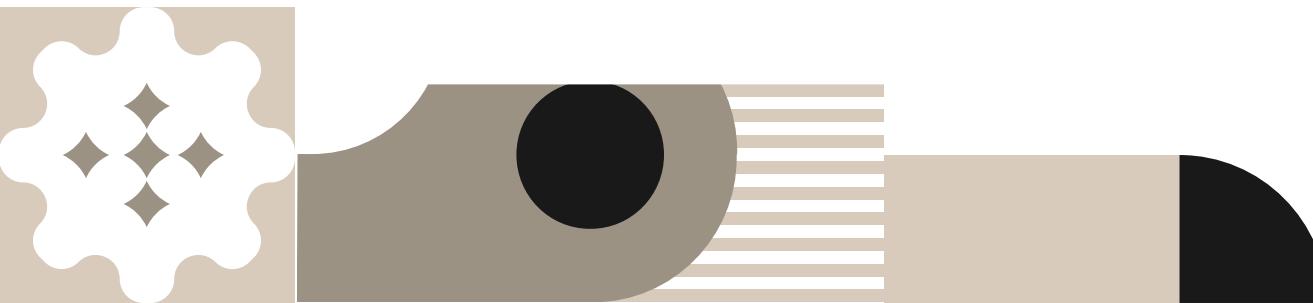
Data Quality

Reliability

- **Large Sample Sizes:** Data is collected from extensive, global samples through the Gallup World Poll, ensuring diverse representation.
- **Standardized Methodologies:** Consistent survey questions and sampling methods improve comparability across countries.
- **Trusted and Renowned Sources:** Data is sourced from reputable organizations, such as the World Bank and WHO, enhancing the findings' credibility and reliability.

Limitations

- **Missing Data:** Some countries may have incomplete data or gaps for certain years, impacting longitudinal analyses.
- **Sparse Time Coverage:** For certain metrics, data may only be available for a few select years or widely spaced years (e.g., 2005, 2010, 2019).
- **Interpolation and Extrapolation:** Metrics such as Healthy Life Expectancy require interpolation for years without data, which, while useful, introduces estimation errors.



03

Context



Context

Motivation

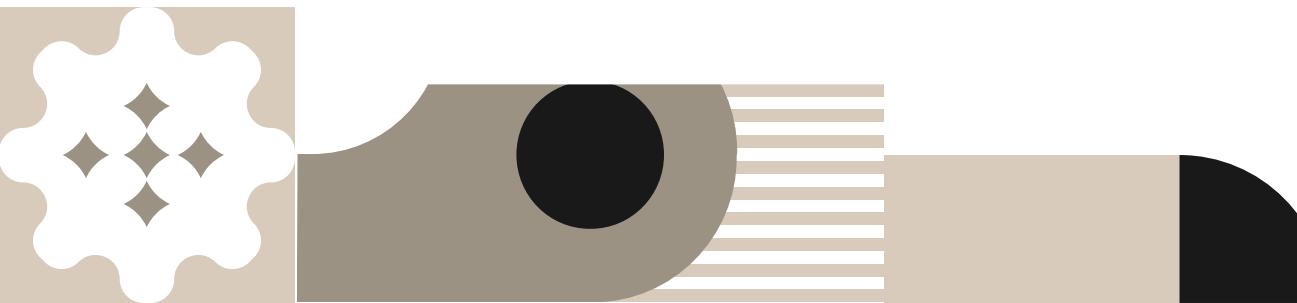
Importance of Analyzing Happiness: Understanding global happiness is essential for effective public policies and economic strategies, revealing areas for improving quality of life.

Regional Comparisons

Cultural, Economic, and Social Differences: Cultural and economic contexts shape how happiness is perceived. Recognizing these differences is vital for accurate data interpretation and targeted interventions.

Potential Impact

Influencing Public Policies: Insights from the World Happiness Report guide policymakers in prioritizing mental health and social welfare, helping to create tailored strategies that enhance societal well-being.



04

User and Needs



User and Need

Target Audience

Beneficiaries of Visualization: Researchers, and the general public will benefit from accessing and interpreting the happiness data

User Needs

Data Visualization Goals: Users seek quick comparisons, understanding correlations, and identifying trends in happiness metrics across countries to inform decisions and discussions.

Accessibility and Interactivity

Design Considerations: Ensuring data visualizations are user-friendly and interactive is crucial. This includes intuitive interfaces, clear legends, and responsive features to enhance understanding for various audiences.

05

Visualization Justification



Chart Selection #1

Interactive Globe

Rationale: The clickable globe is ideal for an intuitive, accessible view of global happiness distribution. It allows users to explore happiness scores by country and dive deeper into specific regional data.

Insight: Quickly identify the countries with the highest and lowest happiness scores and see the geographical distribution of well-being.

- **Question:** Identify a region with high happiness scores. What general trends can you observe in this region?
- **Question:** Can you find a country with a significantly lower happiness score than its neighboring countries? Which one is it?

Happiness Around the World



Legacy Mode i

Chart Selection #1

Radar Chart of Metrics

Rationale: The radar chart effectively compares multiple metrics in a single visualization, highlighting each factor's relative importance to the final score.

Insight: Shows each metric's contribution to happiness in each country, making it easier to analyze strengths and weaknesses in well-being factors.

- **Question:** Which metric contributes the highest happiness in [Country X]? How does it compare to other metrics?
- **Question:** Identify a country with a low contribution in the "Freedom to Make Life Choices" metric. How does this affect its overall happiness score?

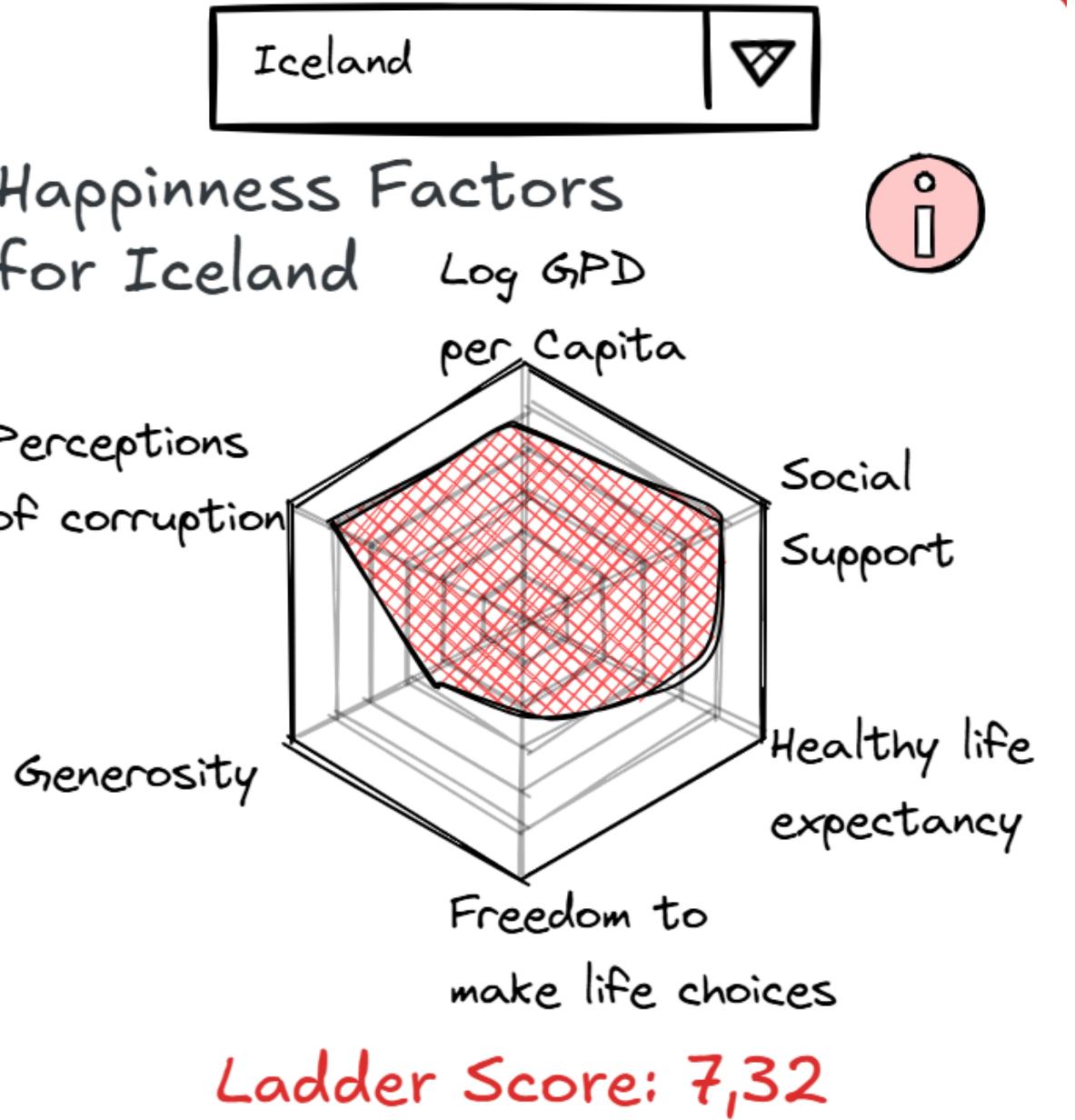


Chart Selection #1

Line Chart of Trends Over the Years

Rationale: A line chart with comparisons to global, European, and other regional averages allows a temporal analysis of happiness metric changes. (2005-2023)

Insight: Identifies trends over the years and enables comparisons between a country's performance and global or regional standards.

- **Question:** How has [Country X]'s happiness score changed over the past decade compared to the global average?
- **Question:** Was there a noticeable dip or increase in happiness scores for [Country Y] in a particular year? Can you think of a reason why?

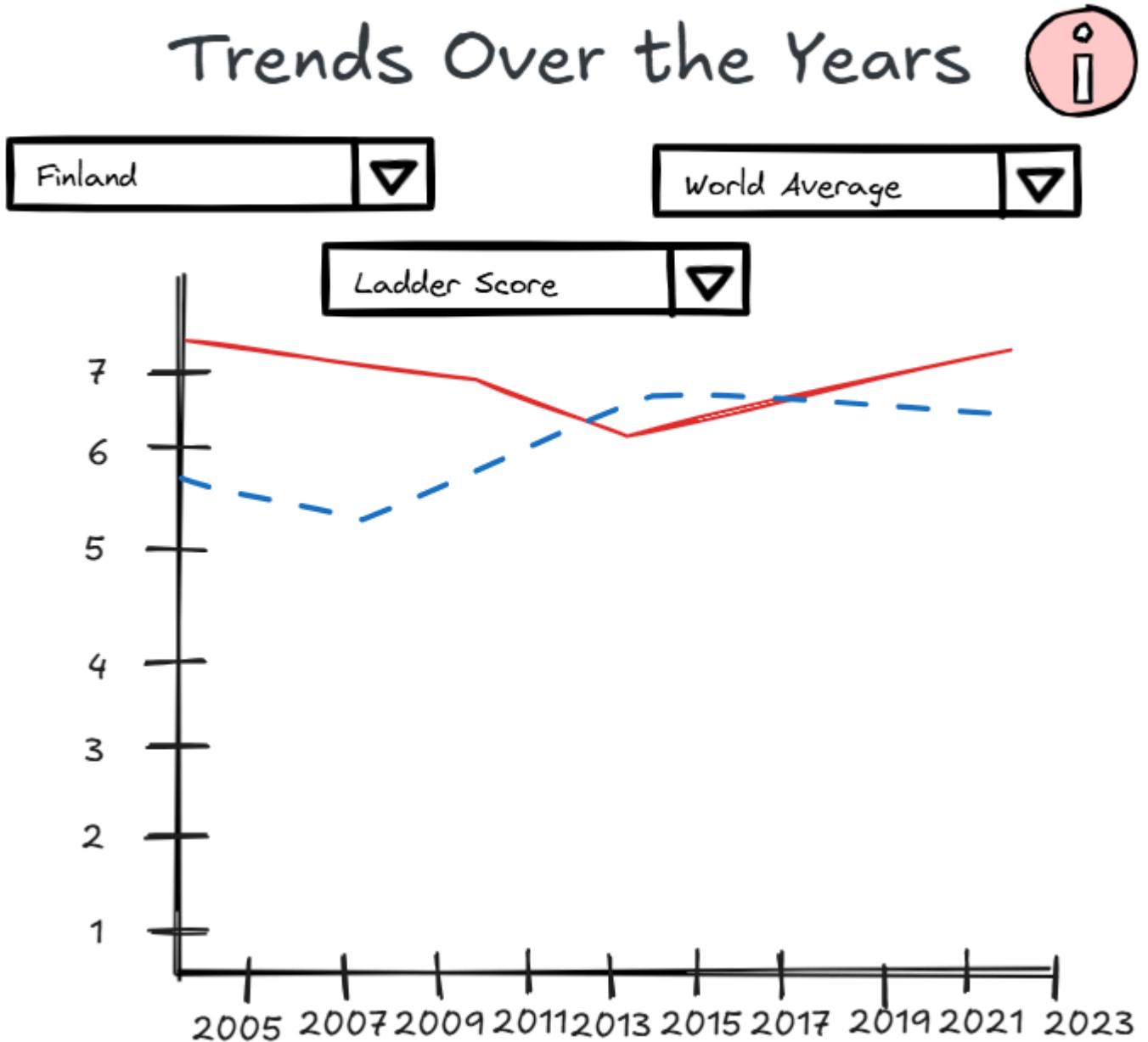


Chart Selection #1

Bar Chart for Percent Differences in Metrics

Rationale: A bar chart showing the percentage difference of each metric compared to the global or regional average helps visualize a country's performance in specific metrics.

Insight: Highlights areas where a country is above or below average, providing a more detailed analysis of strengths and areas for improvement.

- **Question:** In which metrics does a country outperform or underperform compared to the global average, and what insights can this reveal about national strengths and weaknesses?

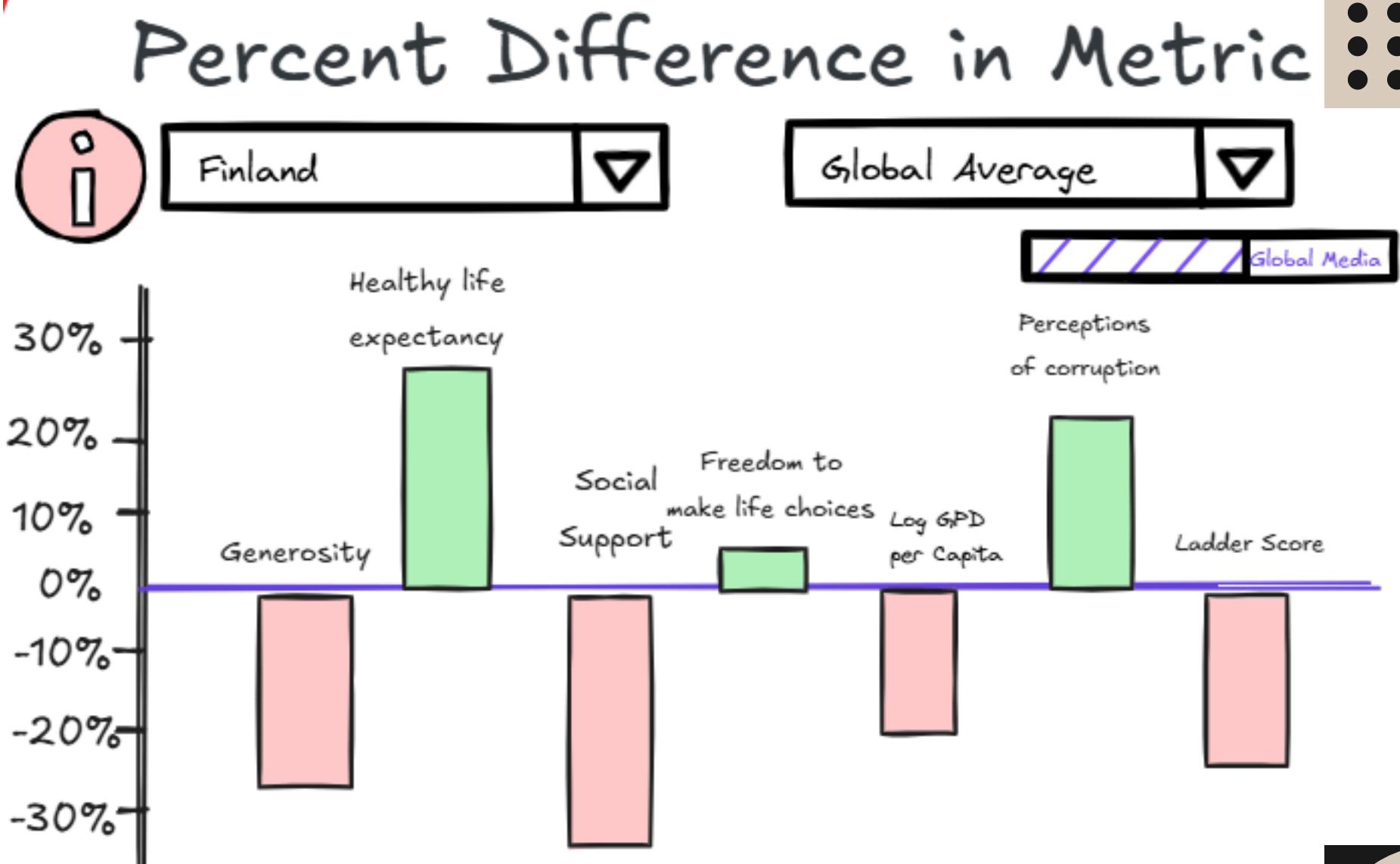


Chart Selection #2

Symmetric Bar Chart for Country Comparison

Rationale: A symmetric bar chart allows for a direct comparison of each happiness metric between two countries, clearly visualizing which country scores higher or lower in specific areas.

Insight: This chart provides an immediate view of how specific happiness metrics differ between the two countries, highlighting cultural, economic, or social factors that may contribute to variations in well-being

- **Question:** Compare [Country A] and [Country B]. In which metric does [Country A] score significantly higher than [Country B]?

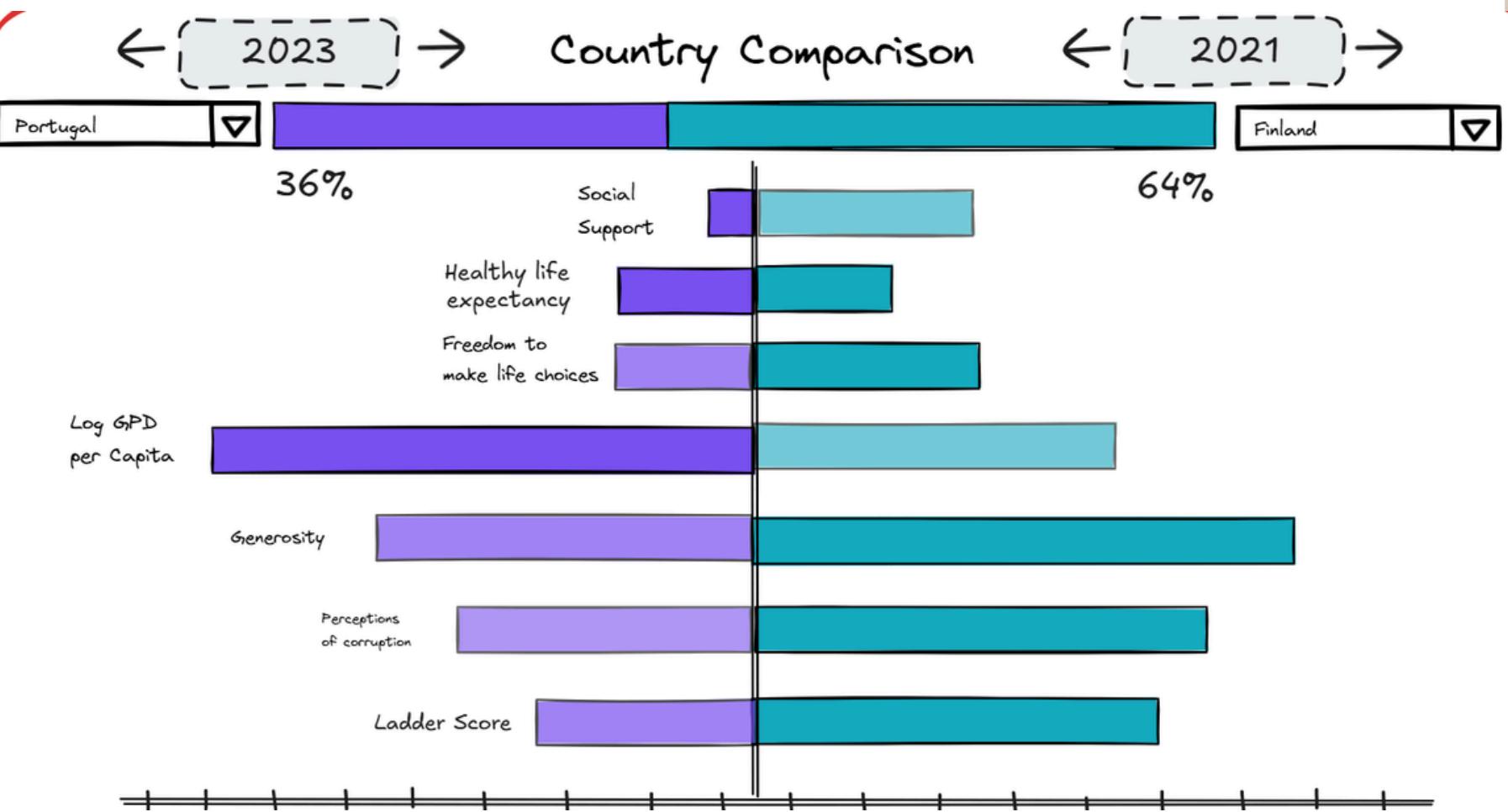


Chart Selection #2

Correlation Heatmap of Metrics between Countries

Rationale: A correlation heatmap highlights how each metric aligns between the selected countries, providing a view of structural similarities or divergences.

Insight: This chart shows which well-being factors are most aligned between the two nations, offering insights into whether high-happiness countries share common characteristics or patterns.

- **Question:** Which metrics have a high correlation between [Country X] and [Country Y]?

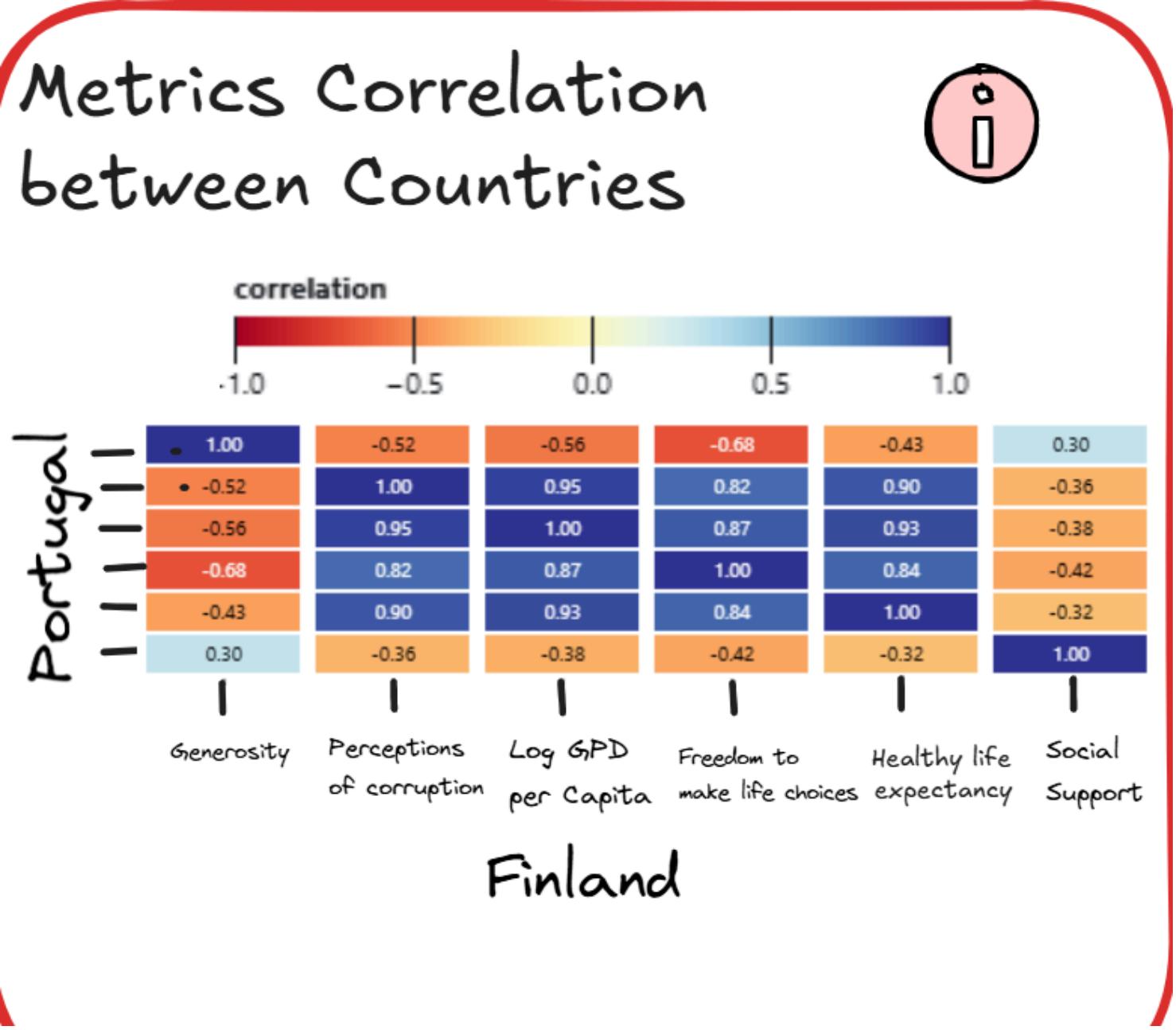


Chart Selection #2

Area Chart - Cumulative Comparison of Key Metrics over Time

Rationale: An area chart can compare cumulative changes in key happiness metrics (e.g., Social Support, Freedom to Make Choices) over time, illustrating the overall trend and growth or decline in these factors for both countries.

Insight: This visualization shows whether certain well-being factors are improving, declining, or remaining stable over time, and how the trends compare between the two countries.

- **Question:** How have key happiness metrics evolved over time for each country, and which factors have shown the most significant changes?

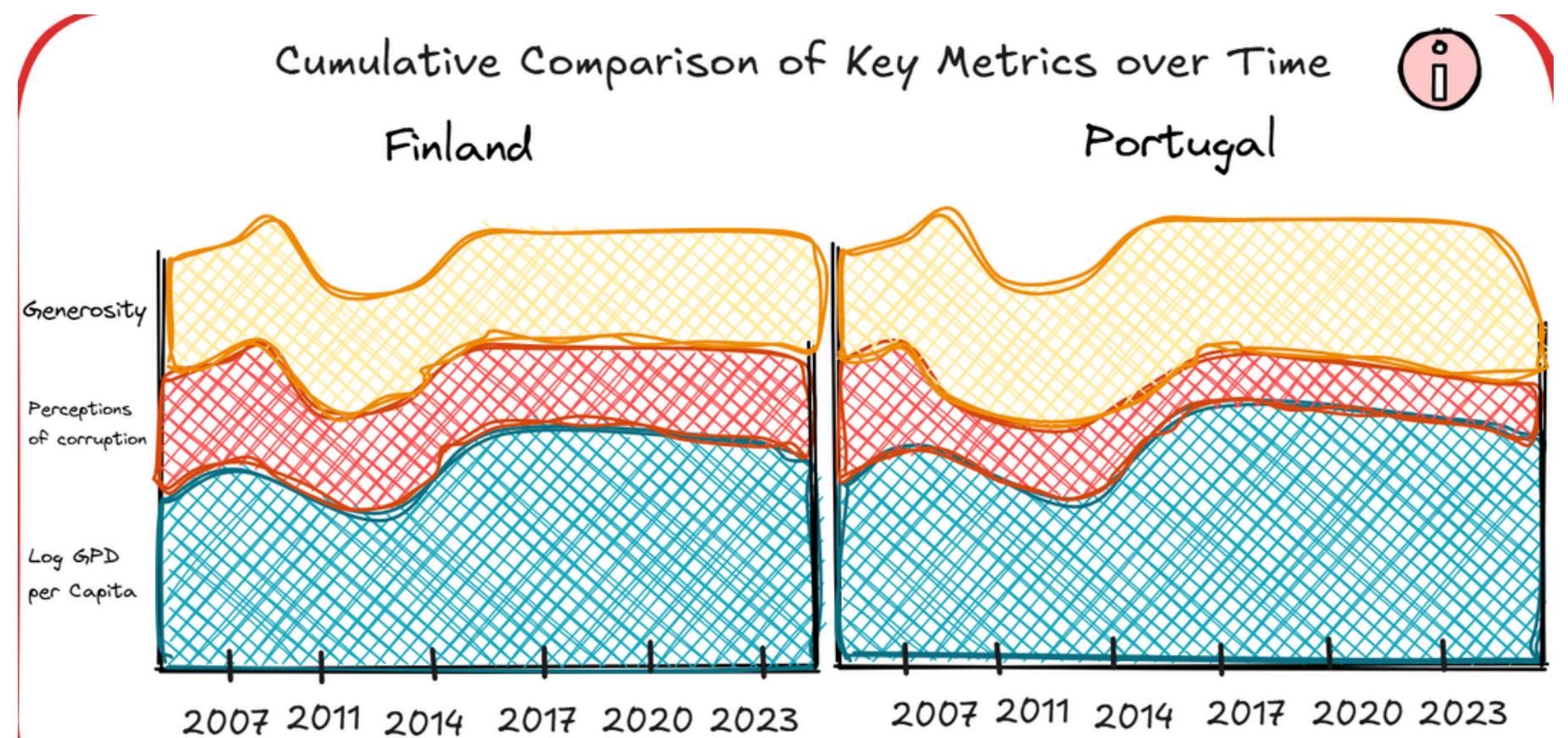


Chart Selection #3

Tree Map - Comparison of Happiness Metrics by Region

Rationale: This visualization highlights regional patterns in happiness metrics, allowing users to quickly identify which regions and countries excel or lag in specific well-being factors.

Insight: Answers questions about regional strengths and weaknesses, showing if certain regions consistently rank higher in specific metrics, such as Social Support in Nordic countries or lower Perception of Corruption in Western Europe.

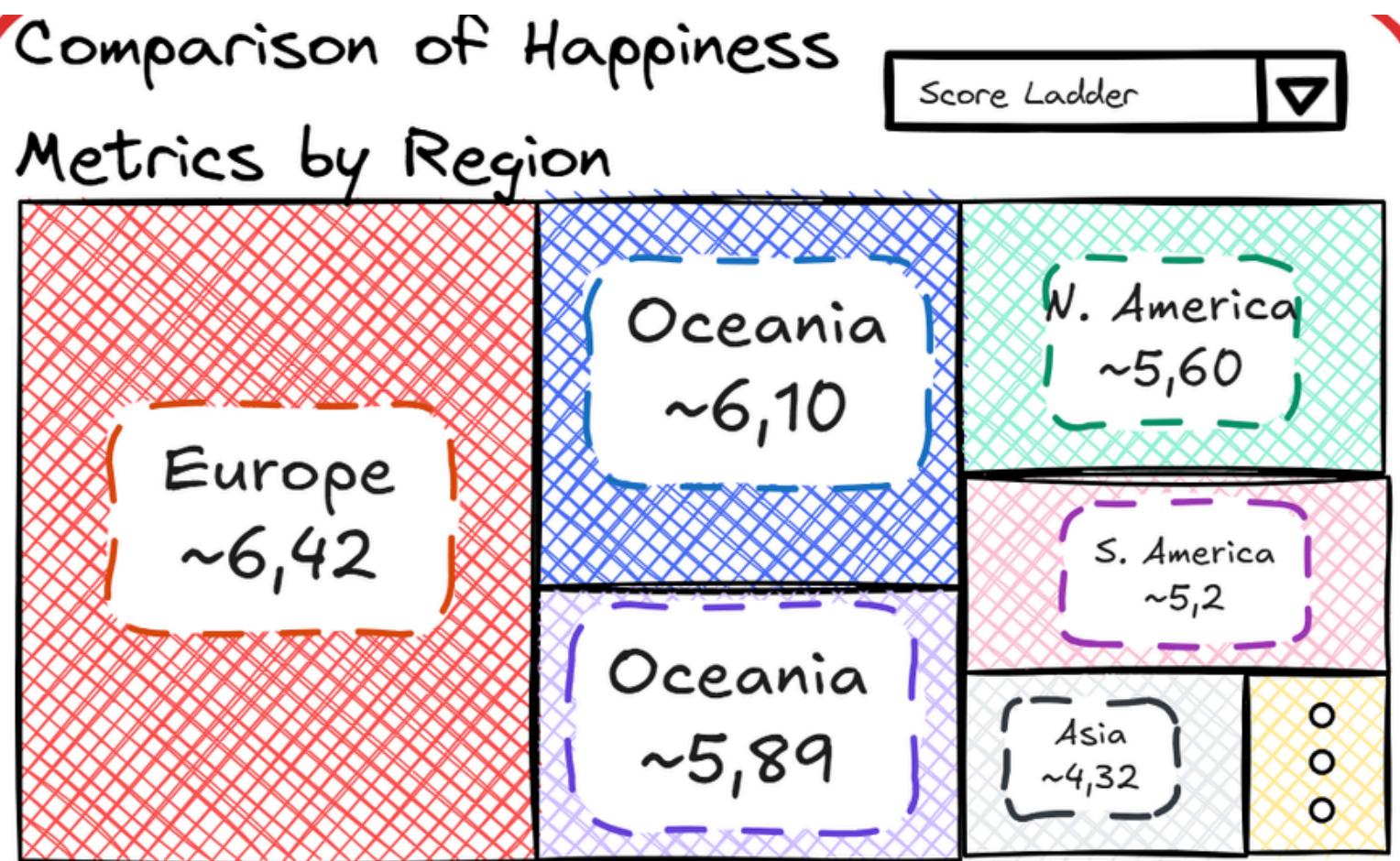


Chart Selection #3

Race Bar Chart - Top 15 Countries from 2005 to 2023

Rationale: This visualization highlights how the happiness rankings of countries evolve over time, offering an engaging way to visualize trends and shifts in global well-being.

Insight: Provides a dynamic view of how certain countries have risen or fallen in happiness rankings over nearly two decades, helping identify key moments of change and long-term trends in well-being

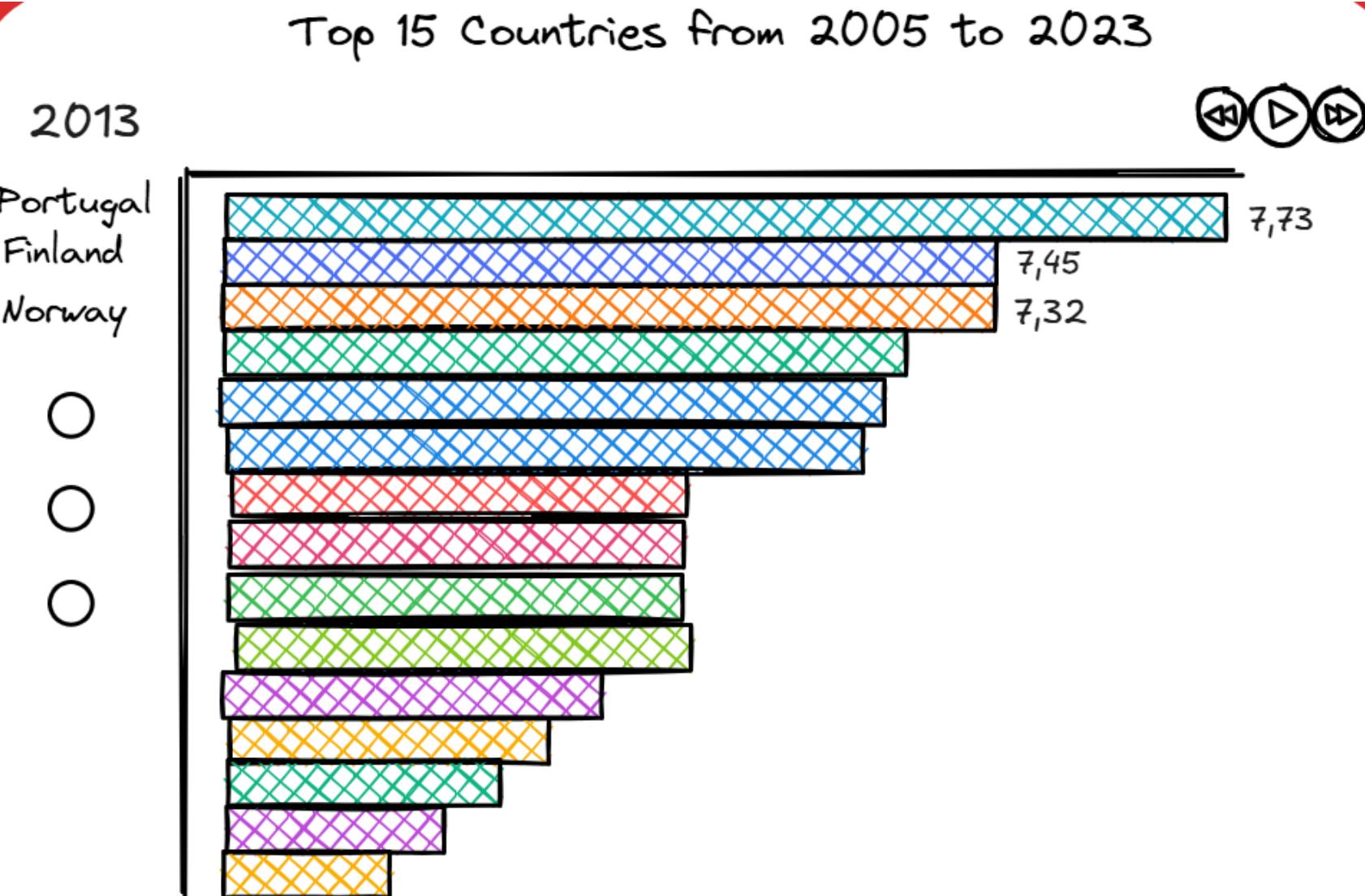
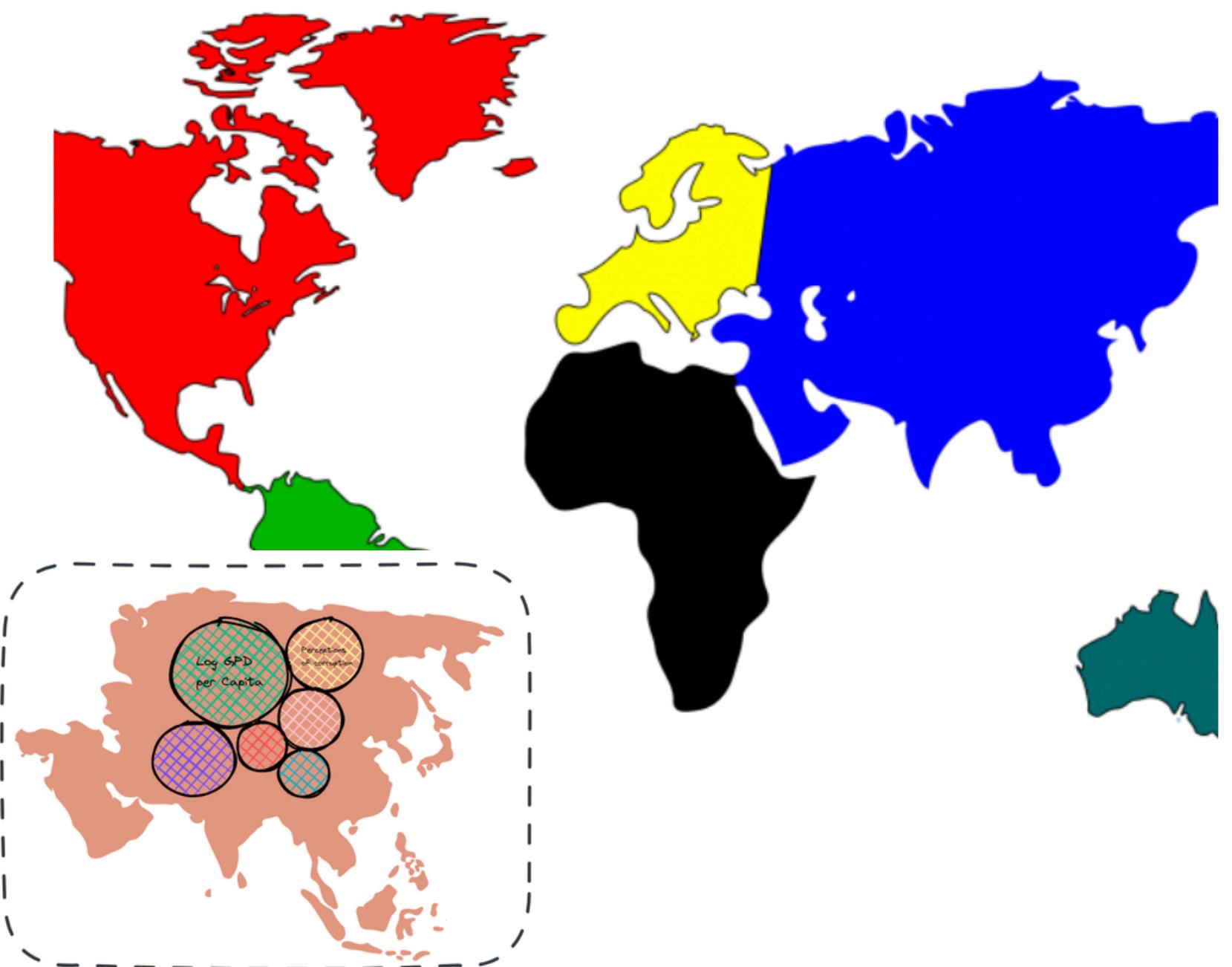


Chart Selection #3

Interactive World Map with Bubble Chart

Rationale: This visualization provides a seamless experience that combines geographic and metric-based data. Users can explore how different factors contribute to happiness in various regions of the world, all within the same interactive environment

Insight: This chart answers the question: How do happiness metrics vary by region, and which metrics have the greatest influence on happiness in specific parts of the world



Thanks!

Do you have any questions?

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Xi'an Jiaotong-Liverpool University
西交利物浦大学



Resources

Helliwell, J. F., Layard, R., Sachs, J. D., De Neve, J.-E., Aknin, L. B., & Wang, S. (Eds.). (2024). World Happiness Report 2024. University of Oxford: Wellbeing Research Centre.

D3 gallery / D3

<https://abqualidade.org.br/avaliacao-do-indice-de-felicidade/>

