

WORLD HAPPINESS REPORT ANALYSIS

By:

Himani Jaiswal

Faiz Mahamud Khwaja

Om Singh

Kashish Saxena

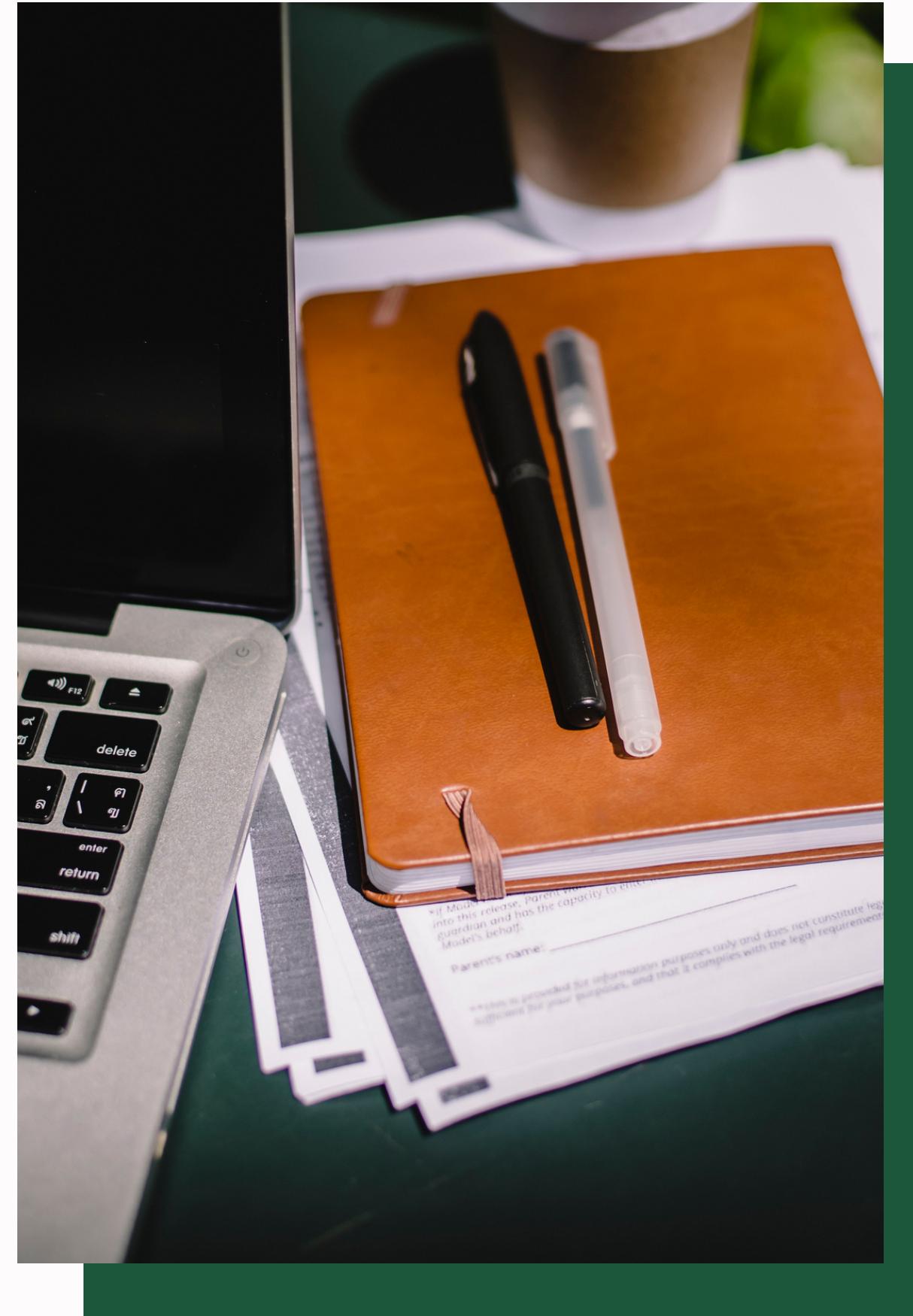
Jithin Shaji

Priyansh Bhardwaj



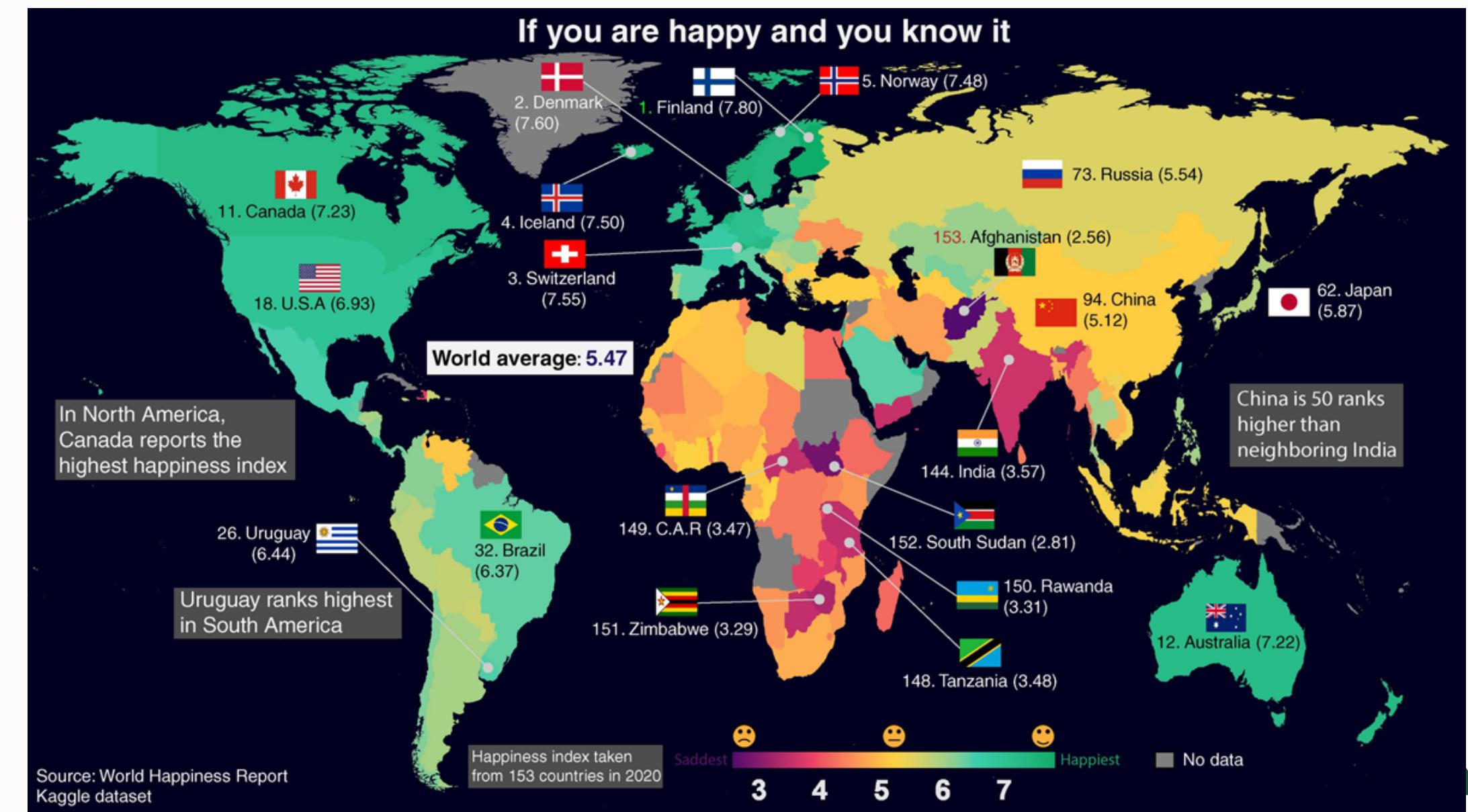
Agenda

- 01 Introduction
 - 02 Objectives
 - 03 Scope of the project
 - 04 Design and Data Collection Methods
 - 05 Methodology/Strategies
 - 06 Analysis
 - 07 Implications
 - 08 Recommendations & Conclusion



Introduction

Exploring Global Happiness: The World Happiness Report, launched in 2012, goes beyond just talking about happiness and tries to measure it for government decisions. Using data from the Gallup World Poll and the Cantril Ladder from 2017-2019, the report looks at global well-being. It goes further than just happiness scores, considering six important things like economic production, social support, life expectancy, freedom, lack of corruption, and generosity. It advocates for happiness as a policy goal, guiding governments toward holistic approaches for societal well-being beyond conventional economic metrics.



Objectives

Objective 01

- Conduct a thorough examination of the World Happiness Report, focusing on global happiness levels and finding insights into Canada.

Objective 02

- Scrutinize six crucial factors - economic production, social support, life expectancy, freedom, absence of corruption, and generosity - and their impact on the happiness scores of countries and compare Canada with the top nation.

Objective 03

- Track and analyze happiness score trends and changes across 2017-2019, identifying significant shifts in countries' happiness levels and exploring the causes and implications.

Objective 04

- Provide recommendations and strategies to enhance the well-being of Canada based on happiness indicators.



Scope of Project

Analyze the World Happiness Report from 2017-2019 to understand how economics, social support, life expectancy, freedom, absence of corruption, and generosity impact happiness scores in different.

Examine changes in happiness scores and rankings between 2017, 2018, and 2019 reports to identify countries with significant shifts and investigate potential causes.

Identified trends, correlations, and patterns. Utilized data collection tools and personnel. Employed SAS software for analysis.

Seek to provide valuable insights for policymakers and social scientists to enhance well-being and inform public policy and development strategies based on happiness indicators.

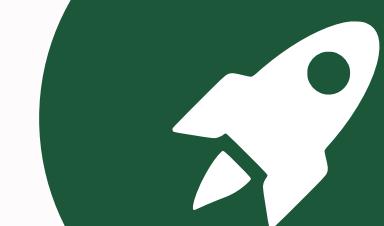
Design and Data Collection Methods



Design Study



Gather Data

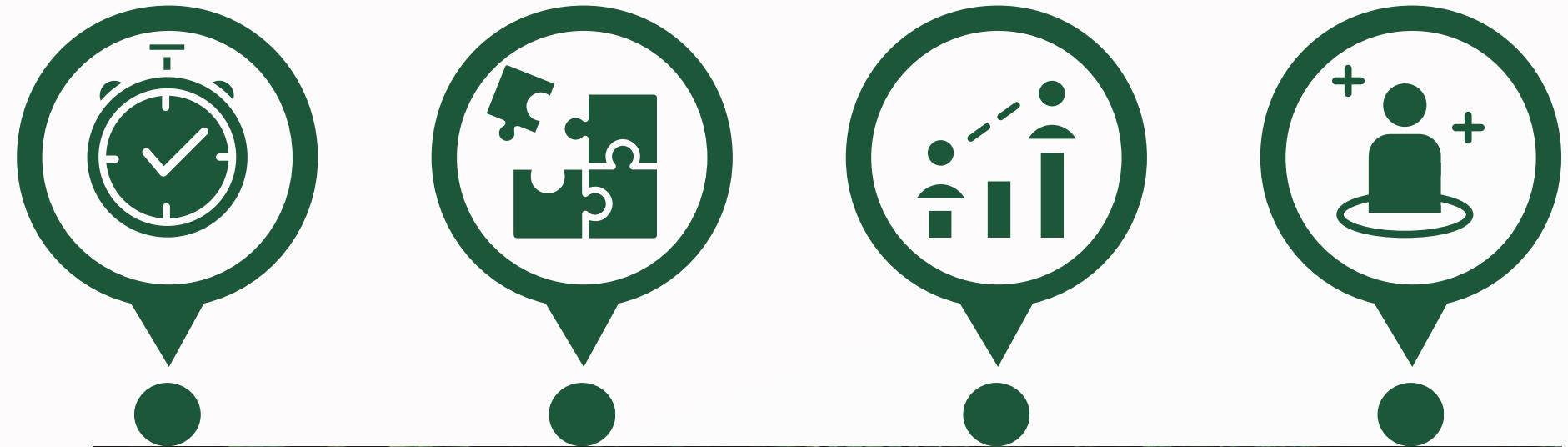


Data Validation
and Reliability



Analyze Data

Methodology/ Strategies



01 Research Framework:

- Utilizes a mixed-methods approach for a comprehensive understanding of global happiness as presented in the World Happiness Report.

02 Quantitative Methodology:

- Data Extraction: Collects numerical data from World Happiness Reports (2017-2019) focusing on happiness scores, rankings, and six determinants.
- Statistical Analysis: Employs statistical tools to examine trends, correlations, and variances.

03 Qualitative Methodology:

- Literature Review: Conducts an extensive review of relevant academic articles and policy papers.

04 Ethical Considerations:

- Ensures ethical compliance in all aspects of the study, particularly in data handling, participant privacy in interviews, and the presentation of findings.
- Risk Management: Identifies potential research risks.
- Timeline and Resource Management: Develops a detailed research timeline and plans for efficient resource use.



Analysis

Correlation Analysis

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations										
	Overall_rank	Score	GDP_per_capita	Social_support	Healthy_life_expectancy	Freedom_to_make_life_choices	Generosity	Perceptions_of_corruption	Year	
Overall_rank	1.00000 467	-0.99088 <.0001 467	-0.80302 <.0001 467	-0.74658 <.0001 467	-0.74715 <.0001 467	-0.53366 <.0001 467	-0.09578 0.0385 467	-0.37643 <.0001 466	0.00454 0.9221 467	
Score	-0.99088 <.0001 467	1.00000 467	0.79705 <.0001 467	0.75807 <.0001 467	0.75063 <.0001 467	0.54966 <.0001 467	0.11657 0.0117 467	0.40552 <.0001 466	0.01938 0.6762 467	
GDP_per_capita	-0.80302 <.0001 467	0.79705 <.0001 467	1.00000 467	0.69643 <.0001 467	0.78164 <.0001 467	0.34492 <.0001 467	-0.00579 0.9007 467	0.32771 <.0001 466	-0.08012 0.0837 467	
Social_support	-0.74658 <.0001 467	0.75807 <.0001 467	0.69643 <.0001 467	1.00000 467	0.64391 <.0001 467	0.42259 <.0001 467	0.00201 0.9654 467	0.20807 <.0001 466	0.02745 0.5541 467	
Healthy_life_expectancy	-0.74715 <.0001 467	0.75063 <.0001 467	0.78164 <.0001 467	0.64391 <.0001 467	1.00000 467	0.31861 <.0001 467	-0.03005 0.5171 467	0.27026 <.0001 466	0.28118 <.0001 467	
Freedom_to_make_life_choices	-0.53366 <.0001 467	0.54966 <.0001 467	0.34492 <.0001 467	0.42259 <.0001 467	0.31861 <.0001 467	1.00000 467	0.26441 <.0001 467	0.45749 <.0001 466	-0.04330 0.3504 467	
Generosity	-0.09578 0.0385 467	0.11657 0.0117 467	-0.00579 0.9007 467	0.00201 0.9654 467	-0.03005 0.5171 467	0.26441 0.5171 467	1.00000 467	0.32369 <.0001 466	-0.22064 <.0001 467	
Perceptions_of_corruption	-0.37643 <.0001 466	0.40552 <.0001 466	0.32771 <.0001 466	0.20807 <.0001 466	0.27026 <.0001 466	0.45749 <.0001 466	0.32369 <.0001 466	1.00000 466	-0.05243 0.2587 466	
Year	0.00454 0.9221 467	0.01938 0.6762 467	-0.08012 0.0837 467	0.02745 0.5541 467	0.28118 <.0001 467	-0.04330 0.3504 467	-0.22064 0.3504 467	-0.05243 0.2587 466	1.00000 467	

- Overall Rank vs. Score:** A strong negative correlation (-0.99088) indicates a high rank corresponds to a low happiness score, and vice versa.
 - GDP per Capita vs. Score:** A positive correlation (0.79705) suggests higher GDP per capita is associated with higher happiness scores.
 - Social Support vs. Score:** A positive correlation (0.75807) highlights the importance of social support in contributing to happiness.
 - Healthy Life Expectancy vs. Score:** Positive correlation (0.75063) suggests longer life expectancy correlates with higher happiness scores.
 - Freedom to Make Life Choices vs. Score:** Positive correlation (0.54966) indicates that more freedom is associated with higher happiness scores.

Analysis

Regression Analysis

The REG Procedure Model: MODEL1 Dependent Variable: Score					
Number of Observations Read 467					
Number of Observations Used 466					
Number of Observations with Missing Values 1					
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	461.60198	76.93366	294.15	<.0001
Error	459	120.05133	0.26155		
Corrected Total	465	581.65331			
Root MSE 0.51142 R-Square 0.7936					
Dependent Mean 5.37607 Adj R-Sq 0.7909					
Coeff Var 9.51288					
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	1.79340	0.11187	16.03	<.0001
GDP_per_capita	1	0.85371	0.10858	7.86	<.0001
Social_support	1	1.10732	0.12207	9.07	<.0001
Healthy_life_expectancy	1	1.05712	0.15546	6.80	<.0001
Freedom_to_make_life_choices	1	1.44501	0.18979	7.61	<.0001
Generosity	1	0.48065	0.22396	2.15	0.0324
Perceptions_of_corruption	1	0.83028	0.29251	2.84	0.0047

The main results of the regression analysis are as follows:

Model Fit: The regression model, with 'Score' as the dependent variable and six predictors, demonstrates a strong fit ($R^2 = 0.794$) among 466 observations.

Significant Predictors: GDP per capita, social support, healthy life expectancy, freedom to make life choices, and perceptions of corruption significantly impact happiness scores ($p < 0.0001$).

Positive Correlations: Higher levels of GDP per capita, social support, healthy life expectancy, and freedom are positively correlated with increased happiness scores.

Moderate Positive Association: Generosity shows a moderate positive association with happiness ($p = 0.0324$).

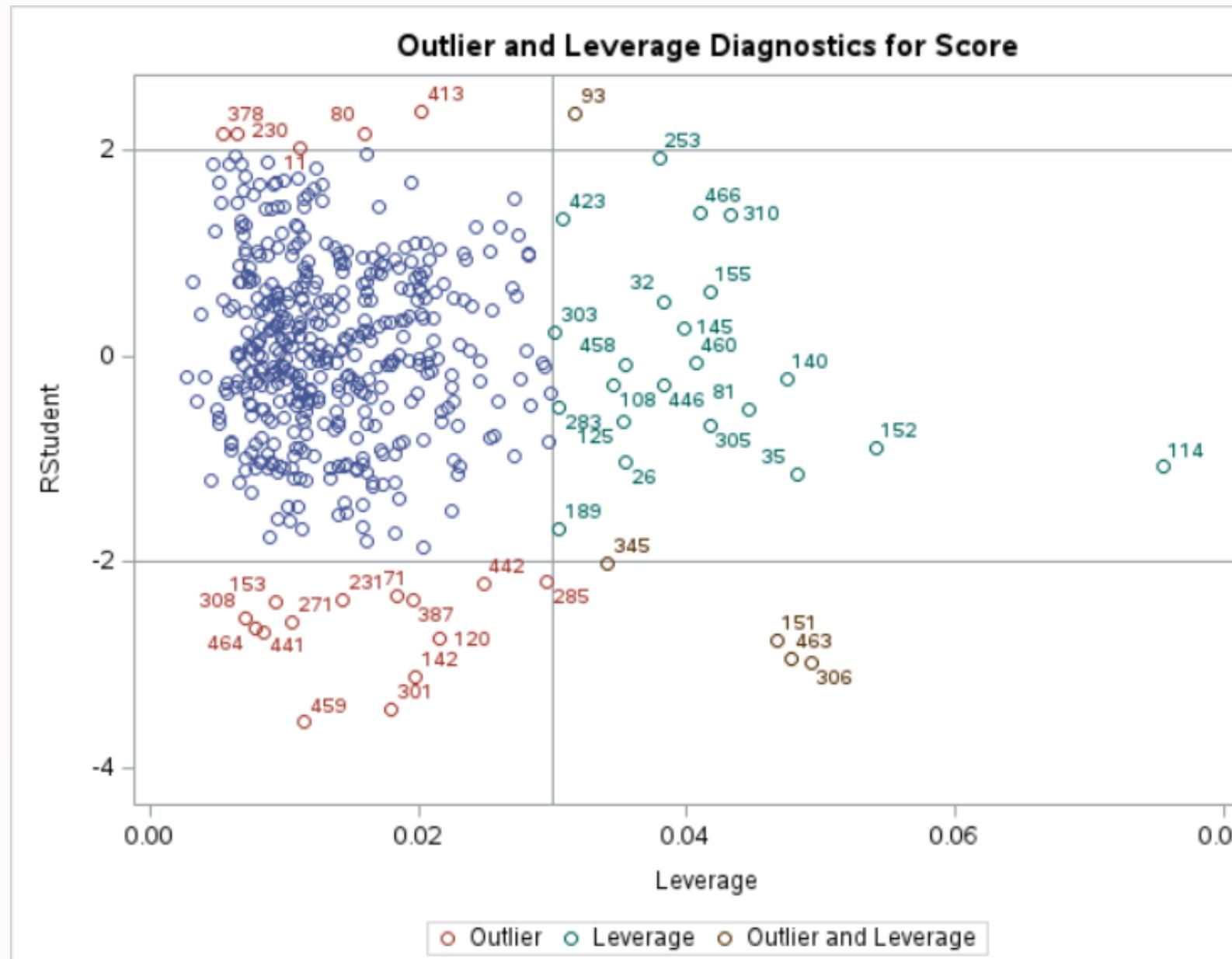
Weaker but Significant Impact: Perceptions of corruption exhibit a somewhat weaker but still significant impact on happiness ($p = 0.0047$).

Parameter Estimates: Highlight a positive relationship between predictors and happiness scores, emphasizing socio-economic elements' importance.

Collective Role: The model suggests that predictors collectively play pivotal roles, emphasizing the multifaceted nature of factors contributing to societal well-being.

Analysis

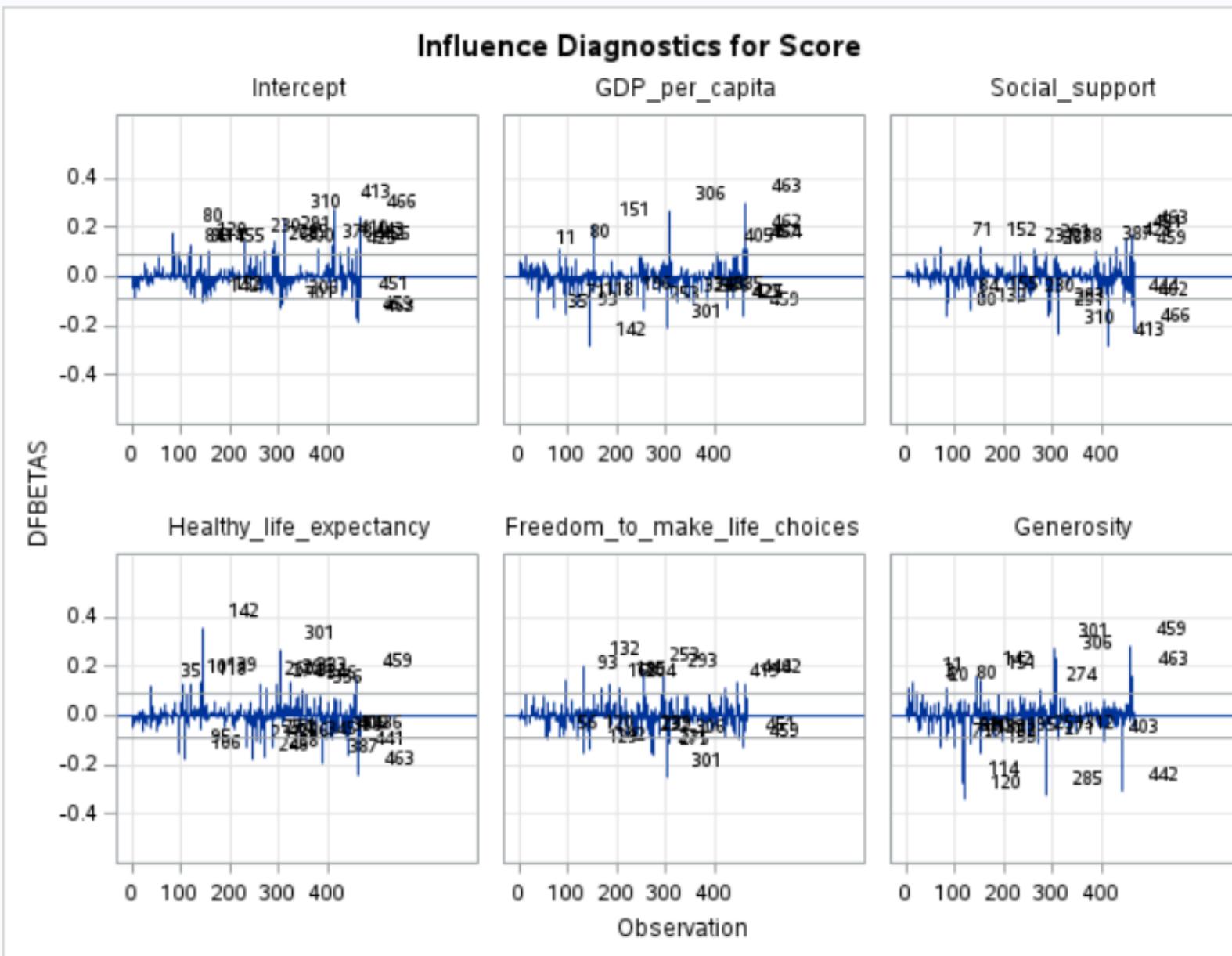
Outlier & Leverage Analysis



Within the dataset, notable outliers are observed, with the highest one represented by point 459, corresponding to the country "Botswana." These outliers, like Botswana, can significantly influence overall trends and merit further investigation to understand their unique socio-economic dynamics shaping happiness scores in comparison to the rest of the data.

Analysis

Influence Analysis



By conducting influence analysis on the dataset, we identified impactful countries that significantly influence overall trends. Specifically, points 459, 463, and 413, corresponding to 'Botswana,' 'Rwanda,' and 'Benin,' respectively, emerge as influential. These nations not only stand out as outliers but also play a crucial role in shaping broader patterns and exerting influence across the entire dataset.

Analysis

Analysis for Canada

- Canada's happiness score has fluctuated over the years
- Recent decline raises concerns

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Overall_rank	3	7.666667	1.15470	23.00000	7.00000	9.00000
Score	3	7.30733	0.02610	21.92200	7.27800	7.32800
GDP_per_capita	3	1.39140	0.07803	4.17420	1.33000	1.47920
Social_support	3	1.50612	0.02534	4.51835	1.48135	1.53200
Healthy_life_expectancy	3	0.92319	0.10490	2.76956	0.83456	1.03900
Freedom_to_make_life_choices	3	0.61603	0.03476	1.84810	0.58400	0.65300
Generosity	3	0.34718	0.07861	1.04154	0.28500	0.43554
Perceptions_of_corruption	3	0.29546	0.01101	0.88637	0.28737	0.30800



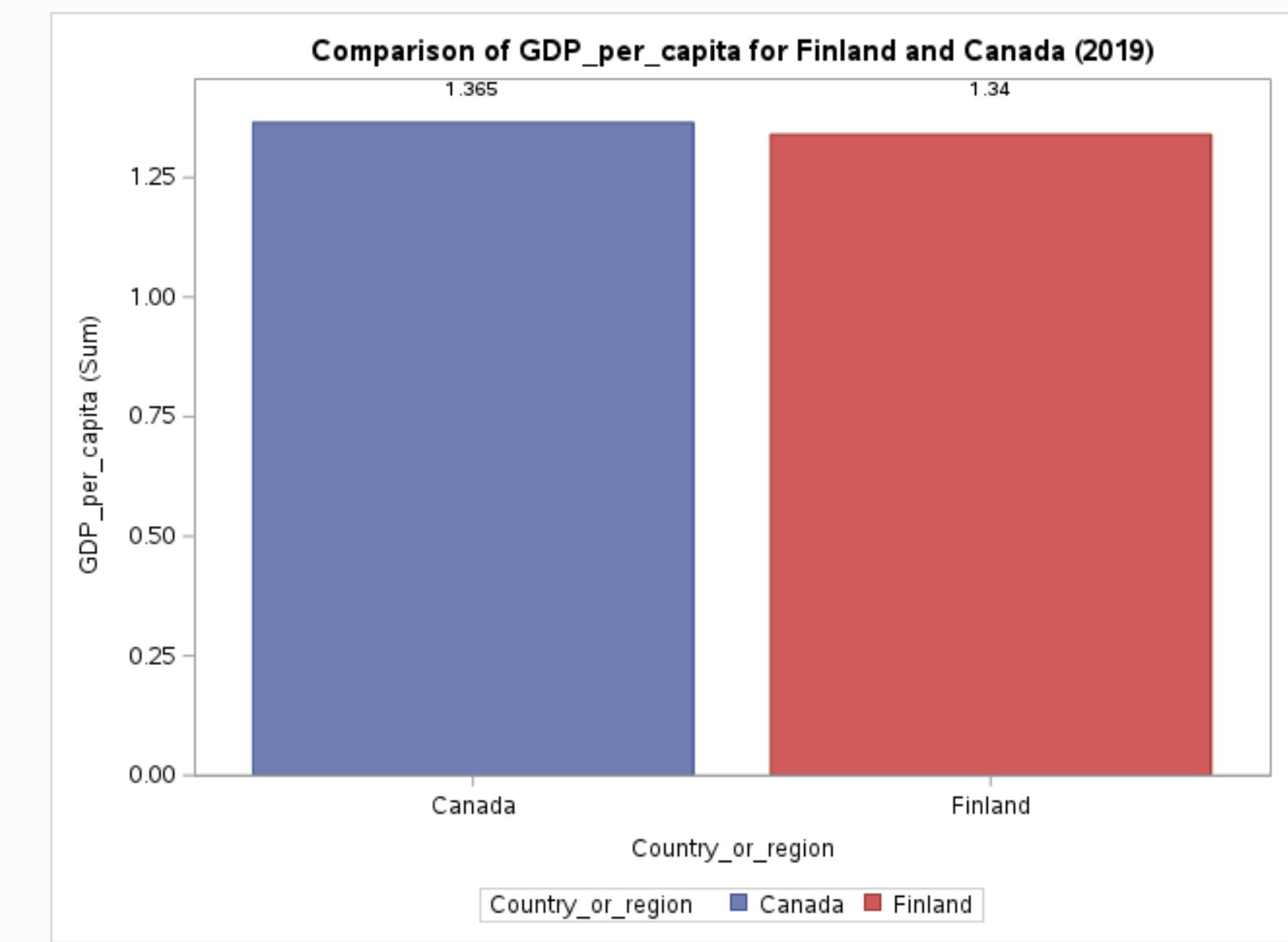
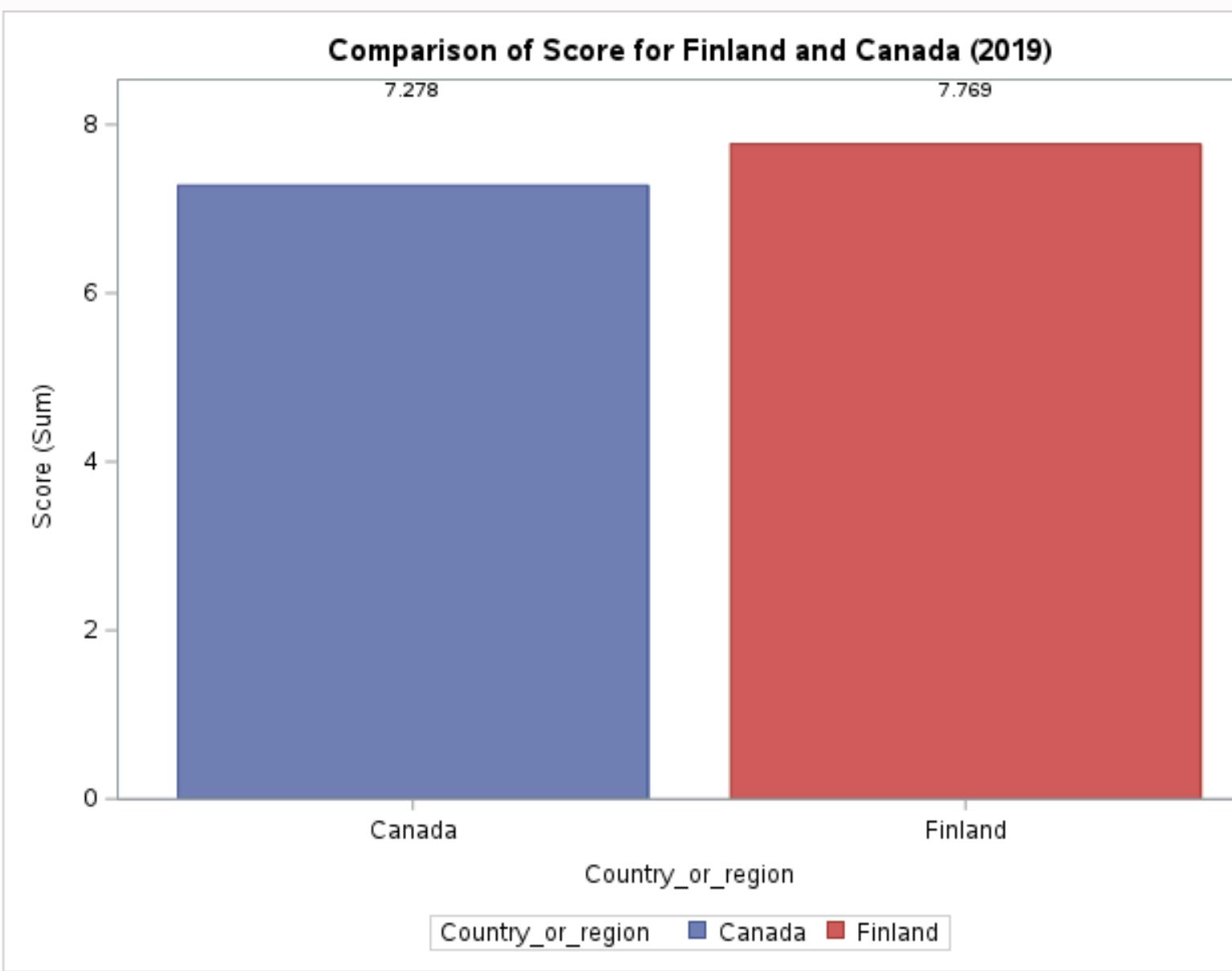
Analysis

Correlation Analysis For Canada

Pearson Correlation Coefficients, N = 3 Prob > r under H0: Rho=0										
	Overall_rank	Score	GDP_per_capita	Social_support	Healthy_life_expectancy	Freedom_to_make_life_choices	Generosity	Perceptions_of_corruption	Year	
Overall_rank	1.00000 0.1477	-0.97322 0.1477	-0.29303 0.8107	-0.03815 0.9757	0.95615 0.1892	-0.79802 0.4118	-0.68502 0.5196	0.98634 0.1054	0.86603 0.3333	
Score	-0.97322 0.1477	1.00000	0.06541 0.9583	0.26682 0.8281	-0.86323 0.3369	0.91517 0.2641	0.49921 0.6672	-0.92206 0.2530	-0.72790 0.4810	
GDP_per_capita	-0.29303 0.8107	0.06541 0.9583	1.00000	-0.94423 0.2136	-0.56019 0.6215	-0.34233 0.7776	0.89728 0.2911	-0.44653 0.7053	-0.73182 0.4773	
Social_support	-0.03815 0.9757	0.26682 0.8281	-0.94423 0.2136	1.00000	0.25618 0.8351	0.63263 0.5639	-0.70187 0.5047	0.12699 0.9189	0.46660 0.6910	
Healthy_life_expectancy	0.95615 0.1892	-0.86323 0.3369	-0.56019 0.6215	0.25618 0.8351	1.00000	-0.58654 0.6010	-0.86834 0.3304	0.99134 0.0839	0.97449 0.1441	
Freedom_to_make_life_choices	-0.79802 0.4118	0.91517 0.2641	-0.34233 0.7776	0.63263 0.5639	-0.58654 0.6010	1.00000	0.10762 0.9314	-0.68784 0.5171	-0.38979 0.7451	
Generosity	-0.68502 0.5196	0.49921 0.6672	0.89728 0.2911	-0.70187 0.5047	-0.86834 0.3304	0.10762 0.9314	1.00000	-0.79567 0.4142	-0.95751 0.1863	
Perceptions_of_corruption	0.98634 0.1054	-0.92206 0.2530	-0.44653 0.7053	0.12699 0.9189	0.99134 0.0839	-0.68784 0.5171	-0.79567 0.4142	1.00000	0.93656 0.2280	
Year	0.86603 0.3333	-0.72790 0.4810	-0.73182 0.4773	0.46660 0.6910	0.97449 0.1441	-0.38979 0.7451	-0.95751 0.1863	0.93656 0.2280	1.00000	

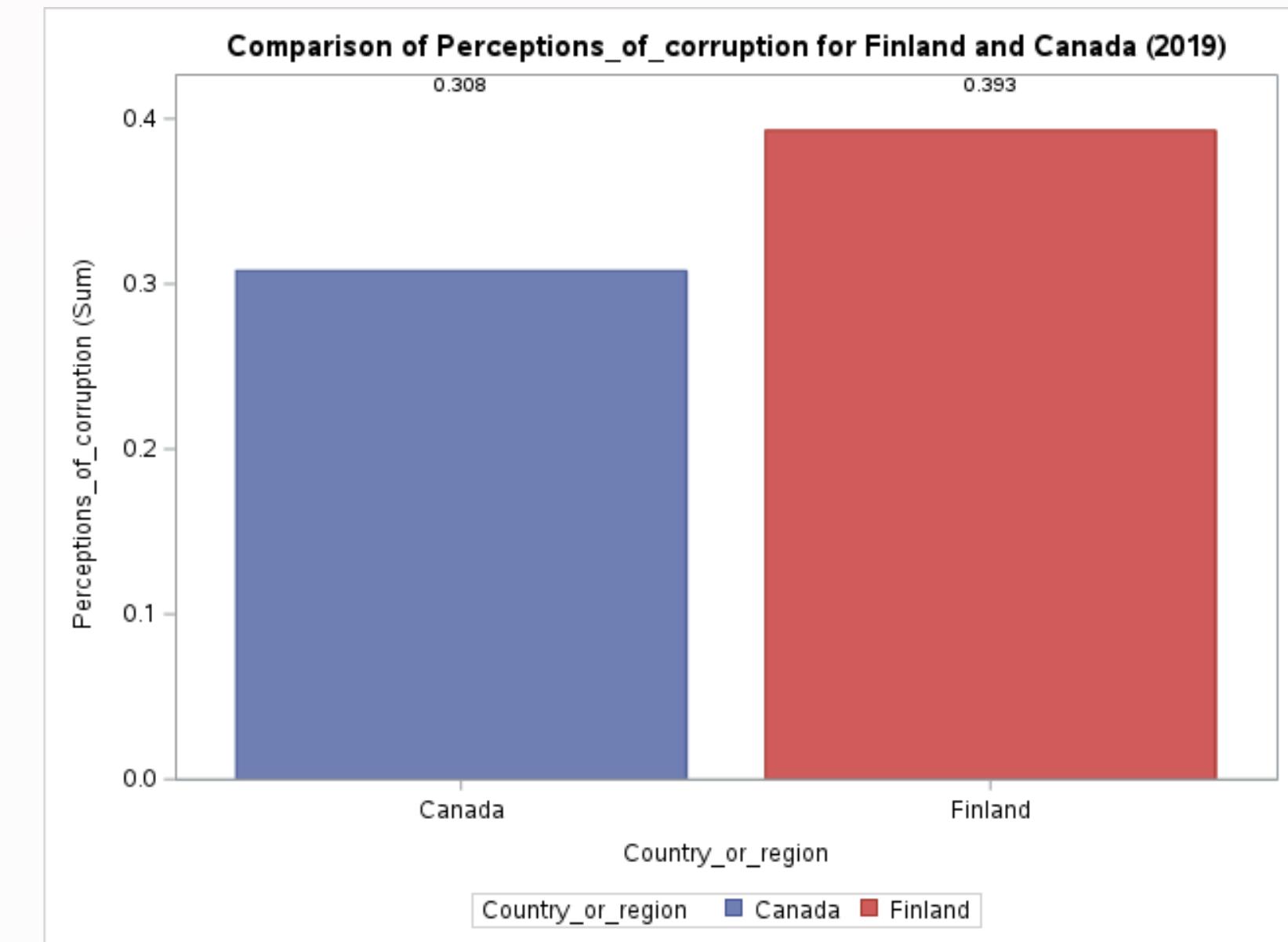
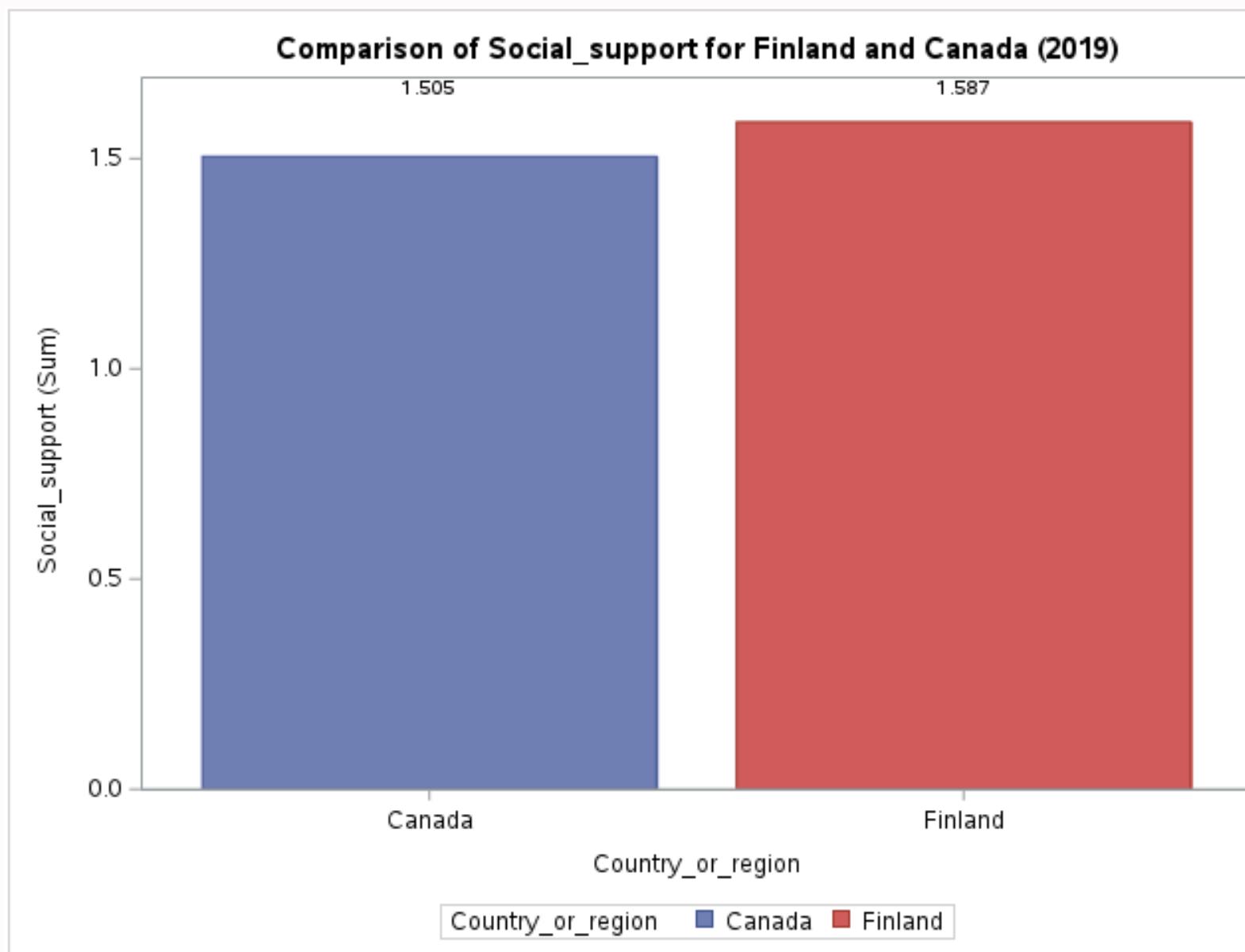
Analysis

Comparing Canada with Finland



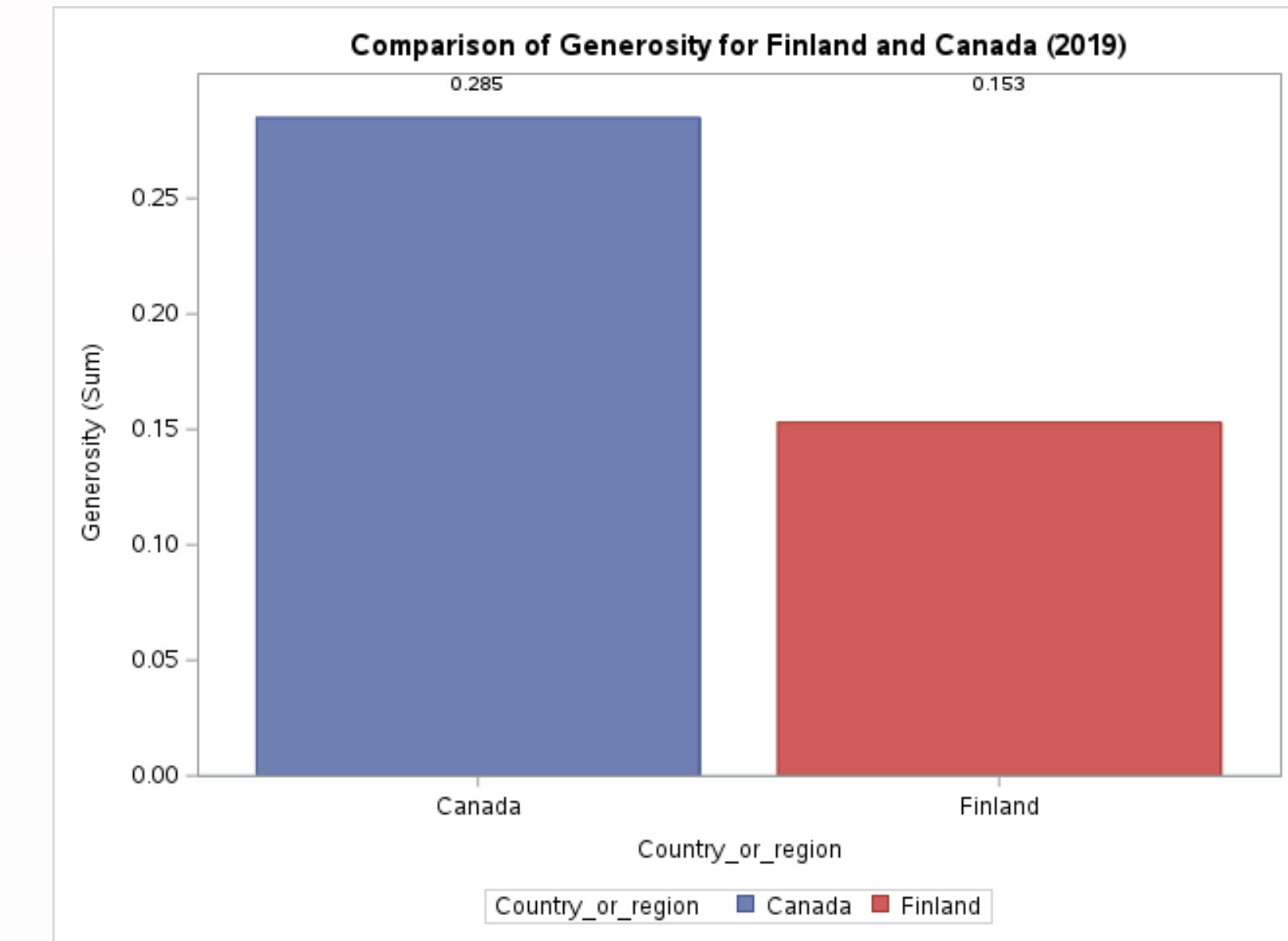
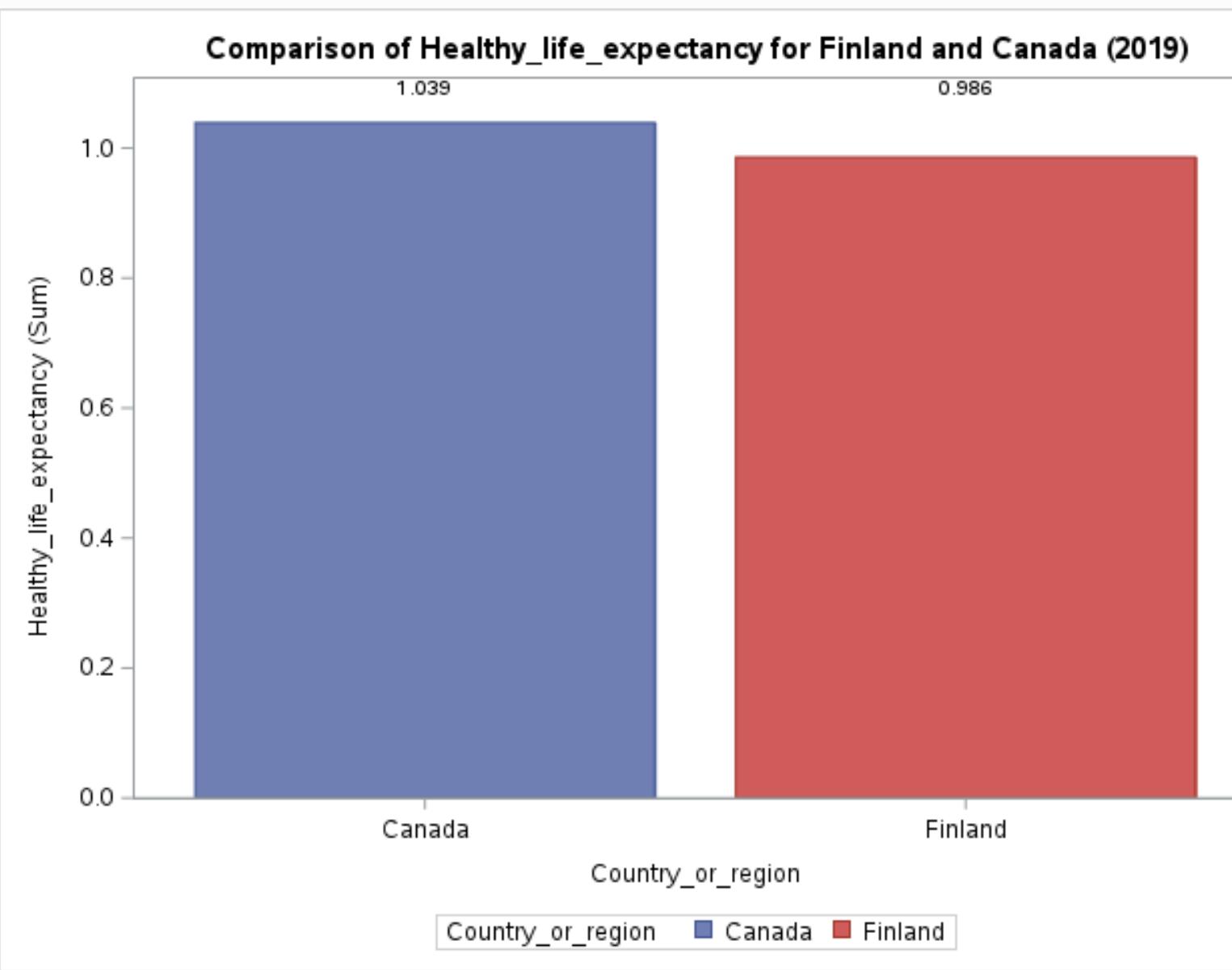
Analysis

Comparing Canada with Finland



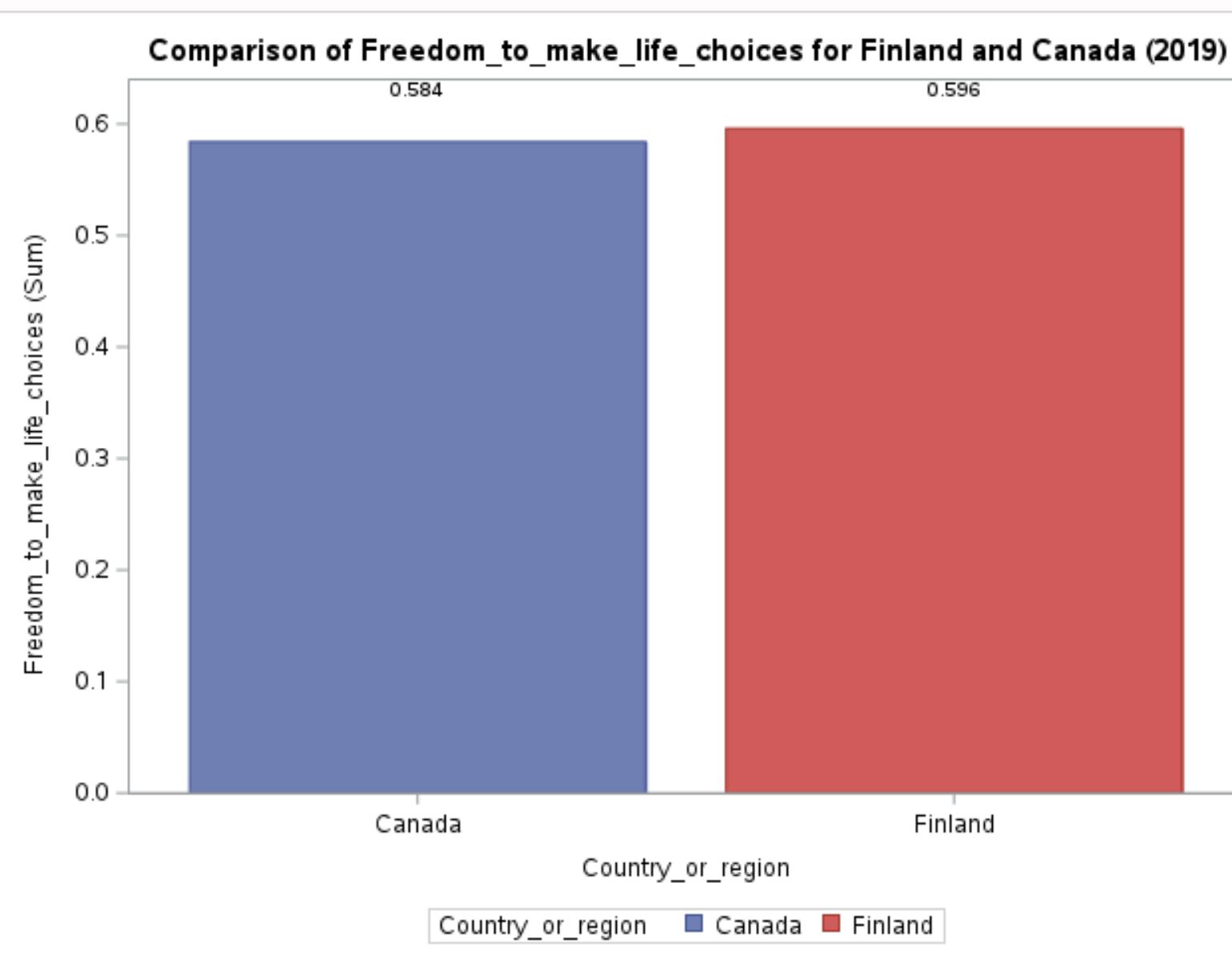
Analysis

Comparing Canada with Finland



Analysis

Comparing Canada with Finland



- Overall Finland has a higher happiness score
- Canada performs better than Finland in Generosity, perceptions of corruption, Healthy life expectancy and GDP per Capita

Implications

Implications for Policymakers & Businesses:

- Target specific areas for improvement
- Guide strategic decisions for sustainable development
- Enhance societal well-being based on nuanced socio-economic understanding

Recommendations

Refine Data Accuracy

Prioritize refining happiness assessment methods for accurate insights. Robust data collection is vital for reliable societal well-being understanding.

Targeted Policy Interventions

Focus on policies boosting GDP, social support, healthcare, and anti-corruption measures for significant societal happiness impact.

Cross-National Learning & Awareness

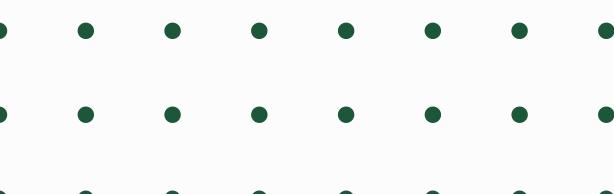
Encourage cross-national learning from successful models like Finland and Canada, fostering education on socio-economic factors for collective well-being efforts.

Corporate Responsibility & Community Engagement

Align corporate social responsibility efforts with societal well-being metrics & empower communities to actively contribute to policies that impact their well-being.

Continuous Monitoring

Implement continuous monitoring to track societal happiness, informing adaptable strategies for progress and improvement.



Conclusion

01 Intricate Relationship:

Socio-economic factors strongly influence a nation's happiness levels.

02 Correlations:

GDP per capita, social support, life expectancy, freedom, corruption perceptions impact happiness rankings significantly.

03 Data Reliability Concerns:

Canada's fluctuating scores emphasize the need for precise assessment methodologies.





THANK YOU!