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Intro to Data Analytics- Final Project

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Topic: Top 5 best countries to live in based on happiness of citizens, cost of living, and average income of individuals.

Data: Cost of living dataset includes information about rent, cost of living, restaurant prices, etc. The World Happiness Report will assign a happiness rating to different countries based on variables such as trust in the government, health, family, and freedom. The Income by Country

Dataset will provide information about the average income for individuals in each country. Education dataset will provide information about each country’s investment in education.

**Cost of living – updated 1 years ago**

* Relative to New York City where the index is set at 100. A city with a value of 150 in the rent variable has an average rent 50% higher than in New York City.
* According to bestplaces.net New York City has an overall average of 187.2. That is about 87% higher than the average cost of living for the United States. The average rent in New York City ranges from about 3,000 to 6,500 (Lower end for 1 bedroom and higher end for 3+ bedrooms).
* Cost of living considers groceries, restaurants, transportation, and utilities.
* Rent values are based on price estimations to rent an apartment in the city.
* Grocery values are calculated by price estimations for items based on weight.
* Restaurant values are based on price estimations for items served at restaurants and bars.
* Purchasing Power values are based on the ability to purchase goods and services in the city for the average annual income for that city.

**World Happiness Report- updated 2 years ago**

* The score variable is the overall score of a particular country or region on a 0 to 10 scale. All the variables following the score variable plus the residual and Dystopia are combined to calculate the score. The country with the lowest overall score, indicating the country with the least happy people, is considered Dystopia.

**Income by country- updated 3 years ago**

* Gross National Income (GNI) is the total income received from both national and international sells, minus what is paid to other countries for the use of their factories. It is then converted to international dollars using PPP rates, divided by the population.
* Gross Domestic Product (GDP) is the sum of money of all goods and services produced within a particular country.

**Education- updated 3 years ago**

* The government expenditure variable displays the percentage of GDP that is invested in education for each country. It also includes funds provided by international sources.
* Gross enrollment ratio shows the ratio of male and female primary students. 1 indicates an equal number of both male and female students. A value less than 1 indicates more males are enrolled, a value greater than 1 indicates more females are enrolled.
* The out-of-school children variable represents children of primary school age range that are not enrolled in school.

**Graphs:**

1. Compare the happiness ratings for each variable for the top 10 ranking countries. Chart, bar chart

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The above facet is grouped by the events that contribute to the happiness rank. The data is consistent throughout the countries as far as priorities go. Generally, most people in these top countries care most about social support and GDP. If one carries these same values with high priority one of these 10 countries may be a good permanent move. One thing that remains constant for both high and low ranking countries is the need for social support. When looking for a place to make your new home, it is always comforting know you are surrounding by loving, and kind individuals.

2. The impact the cost of living has on the happiness rank.

Chart, scatter chart

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|  |  |  |  |
| --- | --- | --- | --- |
| Country | Happiness Rank | Cost-of-living Rank | GNI  per capita |
| Finland | 1 | 20 | 0.912 |
| Denmark | 2 | 6 | 0.935 |
| Norway | 3 | 3 | 0.985 |
| Iceland | 4 | 4 | 0.931 |
| Netherlands | 5 | 17 | 0.939 |
| Switzerland | 6 | 2 | 0.965 |
| Sweden | 7 | 22 | 0.932 |
| New Zealand | 8 | 23 | 0.885 |
| Canada | 9 | 31 | 0.918 |
| Austria | 10 | 24 | 0.927 |

I was curious about whether the cost of living for a country impacts the happiness rank. Above is a scatterplot that shows the top 10 happy countries out of 153 on the x-axis, and their cost-of-living ranking on the y-axis. Countries with higher cost of living rankings indicate a lower cost of living and vice versa. Denmark has the 6th highest cost of living out of 135 countries. Canada has a lower cost-of-living than Denmark as it is ranked the 31st highest cost-of-living country. The two variables seem to have very little correlation. The top 10 happiest countries are on the more expensive end when it comes to cost-of-living. I assumed countries with a lower cost-of-living would be happier due to less stress. However, many other variables contribute to the happiness of citizens. The happiness rank is an accumulation of scores based on GDP, social support, life expectancy, freedom to make choices, generosity, and perception on government corruption. The values in the dataset represent the extent to which the variables contribute to the happiness score. Many citizens stated that GDP contributes a lot to their happiness. It is no surprise that all countries in the top 10 happiness ranking also have high GNI that balances out the cost-of-living.

3. Top happiest countries and their GNI and percentage invested in education.

Chart, bar chart

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Chart, bar chart

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Table

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I filtered my happiness ranking dataset to the top 20 happiest countries. Within those top 20 countries I examined the countries that had GNI data and education data. I was not surprised to see that within the top happiest countries are some of the wealthiest countries. These countries also prioritize education and invest a nice percentage of GDP. I feel as though these countries will continue to rise above others due to funds, and resources, as they all have maintained a consistent GDP over the past 5 years.

Conclusion:

I would consider Canada, Germany, Sweden, Finland, and Netherlands the top 5 best countries to live in. These countries have shown to care about their citizens and know how to maintain a healthy economy. They invest in education to keep the economy growing. Next time I would look more into crime and corruption of countries as well to gain a clearer picture of life in each country. I believe a lot of crime stems from not having the things you desire from life. The economy and structure of a country can contribute to this through systems, and lack of control over finances. I feel as though the top happiest countries will also demonstrate low crime rates.