Relationship Between World Happiness Index, Hoefstede Cultural Dimensions and Government Education Spending

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Abstract: The author analyzes the interplay between the World Happiness Index and a nuanced array of seven variables in this research. Specifically, the focus extends to the Hofstede Cultural Dimensions, encompassing six distinct facets and the financial allocations dedicated to government education spending. The author starts with a literature survey on the profound domains of happiness and wellbeing. Building upon this foundation, the author posits the Hofstede Cultural Dimensions and Government Education Expenditures as prospective variables that may yield a discernible influence on the World Happiness Index. A dataset spanning 58 countries and analytical methodologies of Ordinary Least Squares (OLS) regression and Iteratively Reweighted Least Squares (IRLS) regression are used to test this conjecture. The outcome of this study reveals compelling insights into the association between the World Happiness Index and the identified variables. The results underscore a discernible relationship between the World Happiness Index and specific dimensions of cultural orientation, such as individualism, long-term orientation, and indulgence. Furthermore, the study reveals that government investment in education is another factor influencing the overarching landscape of happiness. These findings transcend mere statistical findings; they serve as beacons of knowledge with far-reaching implications for education policymakers, educators, and individuals interested in understanding the complexities of cultural variations, educational dynamics, and overall wellbeing. The implications of this research can offer relevant information to those who navigate the intricate intersections of cultural diversity, education policy, and the pursuit of societal happiness, such as education policymakers, educators and anyone interested in the issues of cultural differences, education, and wellbeing.

Keywords: happiness index, life satisfaction, cultural differences, wellbeing, world happiness report, perception of happiness, Hofstede cultural dimensions, government education spending, educational policy.

JEL Classification: J24, M12, M53.

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Introduction

The Happiness Index is a thorough survey instrument designed to assess contentment, quality of life, and factors linked to sustainability and adaptability. Its main aim is to measure people’s happiness and general living circumstances. It allows for the examination of disparities in income, levels of trust in the government, social cohesion, and various other facets of well-being unique to different population segments. The Happiness Index method has gained popularity to complement traditional economic indicators, such as GDP, in evaluating the overall well-being of a society. It recognizes that economic prosperity alone does not necessarily lead to happiness and that factors like social support, freedom, and personal fulfilment are also crucial. Prominent happiness metrics include the World Happiness Report and Bhutan’s Gross National Happiness Index, which incorporates both conventional economic indicators and spiritual, cultural, and environmental factors. These metrics enrich the evaluative landscape, recognizing happiness not as an isolated metric but as a reflection of the intricate synthesis of diverse human experiences. In this article, the author hypothesizes that specific dimensions of culture, as defined by Hofstede (such as individualism, long-term orientation, and indulgence), may have a discernible influence on the World Happiness Index. She suggests that specific cultural characteristics could be associated with variations in societal happiness.

The author also proposes that the financial allocations dedicated to government education spending may also play a role in influencing the World Happiness Index. She suggests that investments in education could be a pivotal factor in shaping the overall landscape of happiness within a society. This study explores the combined effect of cultural dimensions and government education spending on the World Happiness Index. By considering these factors together, a more comprehensive understanding of the determinants of societal happiness can be achieved. By analyzing a dataset spanning 58 countries and employing regression methodologies (OLS and IRLS), the study aims to test statistically significant relationships between the World Happiness Index and the identified variables. The regression output is expected to reveal insights into the strength and significance of the relationships.

The main hypothesis involves exploring how specific cultural dimensions and government education spending, when considered together, contribute to variations in the World Happiness Index across different countries. The study aims to provide valuable insights for education policymakers, educators, and individuals interested in understanding the intricate intersections of cultural diversity, education policy, and societal happiness. The decision to analyze a dataset spanning 58 countries was driven by the availability of comprehensive information on all six Hofstede cultural dimensions for these specific nations. The research aimed for a robust analysis by considering only those countries with a complete set of cultural data, ensuring a more comprehensive understanding of the relationships between cultural dimensions, government education spending, and the World Happiness Index. While this selection strategy may limit the generalizability of the findings to countries beyond the chosen 58, it enhances the internal validity and reliability of the study within the specified scope.

The objective is to comprehensively examine the influence of specific cultural dimensions, such as Individualism, Long-Term Orientation, and Indulgence, on the World Happiness Index and assess the role of government education spending in shaping the World Happiness Index. Despite the growing recognition of the World Happiness Index as a comprehensive metric for evaluating well-being, there is a need for a deeper understanding of the specific factors that influence happiness on a societal scale. Additionally, the interactions between cultural dimensions, government education spending, and their combined impact on the World Happiness Index have not been fully researched. Addressing these gaps will provide a more nuanced understanding of the complexities shaping global happiness.

Ultimately, the research aims to provide evidence-based policy recommendations for education policymakers. By offering practical insights, the goal is to guide policymakers in developing strategies that enhance societal well-being through informed interventions in cultural and educational domains. Through these interconnected objectives and aims, this research strives to contribute valuable knowledge to cultural studies, educational policy, and the pursuit of societal happiness.
Happiness Index. Happiness and well-being are essential aspects of human life, garnering significant attention from researchers and policymakers worldwide. This literature review examines key articles contributing to understanding happiness and well-being from various perspectives. In his book “The Psychology of Happiness: A Good Human Life”, Franklin emphasizes the importance of positive emotions, personal values, and meaningful connections. The author sees education as a potential avenue for individuals to develop self-awareness and cultivate a sense of purpose, contributing to their overall well-being. Challenging the idea that external achievements alone can lead to a fulfilled life, the author suggests that happiness is deeply intertwined with personal values, self-acceptance, and a sense of purpose.

The 2015 study by Ye, Ng, and Lian examines how culture contributes to the variation in subjective well-being across different countries. This research underscores the significance of taking cultural influences into account when analyzing happiness on a societal scale. Lu and Gilmour’s article “Culture and Conceptions of Happiness” (2004) reveals differences in happiness orientations between Asian and Euro-American cultures and offers insights into how cultural values shape perceptions of well-being.

In the past, governments often used Gross Domestic Product (GDP) as the primary indicator of a nation’s well-being and growth (Ovaska & Takashima, 2006). However, this approach falls short because it does not account for the disparity between GDP and personal income or between personal income and happiness. A country’s GDP can rise while the per capita income of most of its citizens is decreasing (Layard, 2005). Moreover, personal income alone does not encompass all the elements of personal happiness and well-being (Oishi et al., 2013). GDP generally does not consider the hidden costs of economic development, such as inflation and unemployment. Additionally, an excessive focus on GDP undervalues essential well-being factors like natural resources, knowledge, health, and social relationships (Frank, 1997; Ovaska & Takashima, 2006).

Happiness is also influenced by personal relationships, economic and political freedom, health, education, and income distribution. (Ovaska & Takashima, 2006). These elements can vary among individuals and across different cultures, prompting several countries to start measuring happiness alongside GDP (Musikanski & Polley, 2016). Easterlin (1995; 2001) argues that long-term financial gains have relatively minor effects on the overall quality of life.

Additionally, because individuals are often the best judges of their happiness, subjective well-being can be assessed by surveying people to evaluate their happiness using multiple items (Frey & Luechinger, 2007; Pavot, 1993). The Happiness Alliance index assesses satisfaction and progress across various life domains, including the economy, governance, environment, community, social support, culture, learning, health, time balance, and work (Alkire et al., 2012). These domains include the economy, governance, environment, community, social support, culture, learning, health, time balance, and work. The Happiness Alliance views the Happiness Index as a holistic measure, akin to alternative progress measures employed by the Happy Planet Index and GNHI (Marks, Abdallah, Simms, & Thompson, 2006; Alkire et al., 2012).

The authors of the World Happiness Report have identified seven key determinants of the Happiness Index.

- **GDP** (Gross Domestic Product) – the value of all the goods and services a country produces on a yearly basis.
- **Social support** is the national average of the binary responses (0=no, 1=yes) to the Gallup World Poll (GWP) question, “If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?”
- **Freedom to make life choices** is the national average of binary responses to the GWP question, “Are you satisfied or dissatisfied with your freedom to choose what you do with your life?”
- **Life Expectancy.** The WHO calculates it based on over one hundred different health factors.
- **Generosity** is the residual of regressing the national average of GWP responses to the question, “Have you donated money to a charity in the past month?” on GDP per capita.
- **Perceptions of corruption** are the average of binary answers to two GWP questions: “Is corruption widespread throughout the government or not?” and “Is corruption widespread within businesses or not?” Where data for government corruption is missing, the perception of business corruption is used as the overall corruption-perception measure.
Unexplained happiness. The World Happiness Index is a subjective measure that relies on individuals’ self-reporting and personal perceptions of happiness. Different cultural, social, and individual factors can influence responses, making it a complex and multidimensional concept to quantify accurately (Helliwell et al., 2022).

Hofstede Cultural Dimensions. Hofstede's cultural dimensions theory is a framework developed by Dutch social psychologist Geert Hofstede to describe cultural differences between nations and societies. The theory consists of six dimensions, each of which measures a different aspect of culture:

- **Power Distance.** This dimension refers to the extent to which people in a society accept and expect unequal power distribution. In societies with high power distance, such as many Asian and Middle Eastern countries, people tend to accept hierarchical structures and authority without question. In societies with low power distance, such as many Western countries, people tend to question authority and expect more equal treatment.

- **Individualism vs. Collectivism.** This dimension refers to the extent to which people prioritize individual goals and interests over those of the group. In individualistic societies like the United States, people value autonomy, competition, and achievement. In collectivist societies, such as many Asian and African countries, people tend to value harmony, cooperation, and group cohesion.

- **Masculinity vs. Femininity.** This dimension refers to the extent to which a society values traditionally masculine traits, such as assertiveness and ambition, versus traditionally feminine traits, such as nurturing and empathy. In masculine societies like Austria, Japan, the United States and Germany, people tend to value competitiveness, achievement, and material success. In feminine societies like Denmark, Latvia, Sweden and Norway, people tend to value the quality of life, work-life balance, and social welfare.

- **Uncertainty Avoidance.** This dimension refers to the extent to which people in a society feel threatened by ambiguity and uncertainty. In societies with high uncertainty avoidance, such as many Latin American and Eastern European countries, people tend to value rules, structure, and order. In societies with low uncertainty avoidance, such as the United States and Australia, people tend to be more comfortable with change, risk-taking, and innovation.

- **Long-term Orientation vs. Short-term Orientation.** This dimension refers to how much a society values long-term planning and persistence versus short-term gratification and immediate results. In societies with a long-term orientation, such as China, Estonia, Germany, Ukraine, Korea, Belgium and Japan, people tend to value perseverance, thrift, and respect for tradition. In societies with short-term orientation, such as the United States, Argentina, Mexico, Australia and Ireland, people tend to value quick results, consumerism, and instant gratification.

- **Indulgence vs. Restraint.** This dimension refers to how society allows and encourages the gratification of natural human desires, such as enjoying life and leisure time. In indulgent societies like the United States, New Zealand, Mexico, Denmark, Argentina, Colombia and Brazil, people value personal freedom, creativity, and self-expression. Some examples of restrained societies include many Eastern European and Asian countries such as Ukraine, Poland, Lithuania, Korea, China, Belarus, and Latvia. It is important to note that these dimensions are not absolute and can vary within a society based on factors such as age, education, and profession. However, understanding these dimensions can help navigate cross-cultural communication and avoid misunderstandings.

**Education and Happiness.** Numerous studies and research have consistently shown that education significantly influences individuals’ happiness and well-being. Education provides individuals with knowledge, skills, and competencies that contribute to personal development and self-fulfilment. People with access to quality education often experience a sense of accomplishment and satisfaction, positively affecting their happiness (Guillaume, 2022). Education also opens doors to better economic opportunities, including higher-paying jobs and career advancement. Higher-income levels, often associated with higher levels of education, can enhance an individual’s well-being and happiness (Stryzhak, 2020). Education can foster social connections and networks. In educational settings, individuals often build friendships and form relationships with peers and educators, vital for overall happiness and a sense of belonging (Yang et al., 2022). Education equips individuals with problem-solving and critical-thinking skills, making them more adaptable and resilient in facing challenges. Additionally, education quality and access play significant roles in determining the extent of the impact on happiness (Jiang, 2022).
Guillaume’s (2022) research on the relationship between emotional intelligence, well-being, and education level highlights the potential benefits of higher emotional intelligence for overall life satisfaction and happiness. According to Jiang (2022), college education is a potential influencer of happiness and a catalyst for positive change in one’s life, which provides individuals with enhanced skills, opportunities, and personal growth. In his study about the intricate relationship between education, income, economic freedom, and happiness, Stryzhak (2020) argues that education is a potential mediator or moderator in the complex dynamics affecting individual well-being.

Yang et al. (2022) recognize education as a foundational element that underpins overall life satisfaction and significantly contributes to individuals’ well-being, given its potential to enhance socioeconomic opportunities and personal development. Governments and policymakers recognize the importance of education in promoting well-being and often invest in educational initiatives to improve overall happiness levels within their countries. By enhancing educational opportunities and outcomes, countries can positively influence their citizens’ happiness and contribute to a happier and more prosperous society.

Based on the research findings discussed above, a substantive amount of evidence suggests a connection between education and happiness. Building on those results as well as on the research by Rajkumar (2023) that indicates the significance of Hofstede cultural dimensions in understanding happiness, we suggest that some of the Hofstede cultural dimensions and government education expenditures could be potential determinants of happiness and might be associated with the World Happiness Index. In the next part, the author discusses the methodology we used to support this hypothesis.

**Methodology**

To create a regression with variables Happiness Index, Hofstede cultural dimensions, and Government Education Spending per capita, we used three datasets for 58 countries. This is the number of countries for which a full set of all 6 Hofstede cultural dimensions is available. The data for the countries with less than 6 Hofstede dimensions available is not used for this study. One of the datasets includes the World Happiness Index (2022) for 2019-2021. Next, a dataset with annual government education spending per capita in 2021 was used. Lastly, the latest available dataset with Hofstede cultural dimensions for 2015 was used. Hofstede cultural dimensions are not calculated every year. However, once measured, they are believed to be valid for multiple years because they measure fundamental cultural characteristics that change very slowly over time.

We used these datasets to create a multiple linear regression model that predicts the happiness index based on government education spending and Hofstede cultural dimensions. The equation for the multilinear regression that explains the Happiness Index based on government education spending and 6 Hofstede dimensions would be:

\[
E(\text{Happiness index}) = \beta_0 + \beta_1(\text{Power distance}) + \beta_2(\text{Individualism}) + \beta_3(\text{Masculinity}) + \beta_4(\text{Uncertainty avoidance}) + \beta_5(\text{Long-term orientation}) + \beta_6(\text{indulgence versus restraint}) + \beta_7(\text{government annual education spendings per capita}),
\]

where \(\beta_0\) is the intercept, \(\beta_1-\beta_6\) are the coefficients for each of the cultural dimensions, and \(\beta_7\) is government annual education spending per capita.

This research aims to understand how changes in one or more independent variables (in this case, government annual education spending and Hofstede cultural dimensions) are associated with the changes in the dependent variable (in this case, the World Happiness Index). The coefficients estimated by the Ordinary Least Squares (OLS) regression method represent the expected change in the dependent variable for a one-unit increase in the corresponding independent variable, holding all other variables constant. Based on the OLS regression output, the equation for the multilinear regression that the author received is:

\[
E(\text{Happiness Index}) = 4.760574 -.0037847*X_1 + .0085047*X_2 -.0031828*X_3 + .0030413*X_4 + .0067046*X_5 + .0111977*X_6 + .000276*X_7
\]

(1)
Figure 1. Results of OLS Regression of the World Happiness Index on Hofstede Cultural Dimensions (Power Distance, Individualism/Collectivism, Masculinity/Femininity, Uncertainty Avoidance, Long Term Orientation, Indulgence) and Government Education Spending

Source: Author’s own development using Stata software

**Dependent variable:** Happiness Index (hindex2022)

**Independent variables:**
X1-Power distance (pdi)
X2-Individualism (idv)
X3-Masculinity versus femininity (mas)
X4-Uncertainty avoidance (uai)
X5-Long term orientation vs Short term orientation (ltowvs)
X6-Indulgence versus Restraint (ivr)
X7-Government Education expenditure per capita (schspend2021)

To assess the significance and strength of these relationships, the author analyzed the p-values and the R-squared value of the model. A low p-value, usually below 0.05, signals a strong and statistically significant connection between the independent and dependent variables. The R-squared value, which falls within the range of 0 to 1, measures the portion of the variability in the dependent variable that can be accounted for by the independent variables in the model. A higher R-squared value suggests that the model is more effective in forecasting the dependent variable.

Analyzing the OLS regression output, the author finds that the R-squared is relatively high in our case (0.7052), and p-values of 0.05 or less are observed for the variables Individualism (0.043), Indulgence (0.007) and Government Education Spending (0.002). The p-value close to the satisfactory p-value of 0.05 or less threshold is observed for the variable Long-Term Orientation vs Short-Term Orientation (0.074). The fact that Prob>F (p-value for the whole model test) is (0.000) is another indicator that there is a relationship among the variables in our dataset and that independent variables reliably predict the dependent variable. The author can also see that Indulgence has the highest impact on the World Happiness Index compared to other variables because it has the highest coefficient of .0111977, significantly higher than any other coefficient in the regression.

To reduce the influence of potential outliers and heteroscedastic errors, the author runs robust regression using the IRLS regression method (See Figure 2.) Based on IRLS regression output, p-values of 0.05 or less are observed for Individualism (0.005), Long-Term Orientation vs Short-Term Orientation (0.039), Indulgence (0.000) and Government Education Spending (0.005). Based on the IRLS regression output, the equation for the multilinear regression is:
E (Happiness Index) = 4.98497 - .0034059*X₁ + .0099063*X₂ - .0031574*X₃ + .0002911*X₄ + .0063567*X₅ + .012177*X₆ + .0001982*X₇

(2)

Figure 2. Results of IRLS Regression of the World Happiness Index on Hofstede Cultural Dimensions (Power Distance, Individualism/Collectivism, Masculinity/Femininity, Uncertainty Avoidance, Long Term Orientation, Indulgence) and Government Education Spending

Source: Author’s own development using Stata software

Discussion

The current domains for calculating the World Happiness Index cover such significant areas as GDP per capita, Social Support (binary), Healthy Life Expectancy at Birth, Freedom to Make Life Choices (binary), Generosity (binary), Perception of Corruption (binary), the list does not exhaust all the possible factors that might be associated with happiness. The findings of this research, specifically the variables that show statistically significant results, could help further explain the perceptions of happiness and wellbeing.

The findings show that the strongest factor that affects the World Happiness Index is the indulgence vs. restraint cultural dimension. It means that the countries that score higher on this dimension are more likely to have higher levels of happiness and wellbeing because there is a higher emphasis on the idea that it is important to enjoy life and find ways to have satisfying and meaningful experiences. People in Individualistic societies might prioritize their wellbeing awareness more than people in collectivist societies. Another explanation could be the fact that in individualistic countries, there has been a long-standing practice of taking time to understand one’s inner world and analyze the factors that cause happiness or unhappiness (for example, using the help of a counsellor or a psychologist to understand better one’s inner world). On the contrary, in collectivist societies, there might be a strong group effort to deemphasize individual and solitary activities such as contemplative examination of one’s inner world.

The following statistically significant variable associated with the World Happiness Index is Long-Term Orientation vs Short-Term Orientation. It means that the countries that score
higher on this dimension are more likely to have higher levels of happiness and well-being because there is a higher emphasis on perseverance and persistence versus instant gratification and immediate results. Thus, one’s sense of happiness is less likely to be affected by something that does not meet their expectations or does not bring expected results quickly.

Conclusions

In exploring the factors influencing the World Happiness Index across 58 countries, our research unveils valuable insights into the intricate web of cultural dimensions, government policies, and individual well-being. The Indulgence vs. Restraint cultural dimension emerges as a robust predictor, indicating that nations prioritising enjoyable and meaningful experiences tend to exhibit higher happiness levels. Moreover, the significance of Individualism suggests that societies valuing self-awareness and individual well-being are associated with happiness, shedding light on the impact of cultural dimensions on subjective well-being.

The relationship between Government Education Expenditure and the World Happiness Index emphasises the pivotal role of education in shaping national well-being. Countries with increased investments in education tend to show higher happiness levels, suggesting a need to reevaluate educational budgets to prioritise societal happiness. Additionally, the association between Long-Term Orientation and happiness suggests that societies emphasising perseverance and delayed gratification experience higher levels of subjective well-being.

The practical implications of findings extend to policy recommendations and cultural sensitivity. Policymakers are encouraged to consider the evidence supporting the positive association between government education expenditure and happiness, potentially leading to substantial improvements in national well-being. As the author puts the research implications into practical context, it is essential to recognize the nuanced dynamics and envision avenues for future exploration. Further research should study how cultural dimensions and government education expenditure influence happiness. Employing qualitative methodologies would be optimal for more nuanced investigation of these issues. Cross-cultural studies could unveil cultural nuances that could reinforce or counteract the identified associations, providing a more comprehensive understanding of the universal and context-specific elements influencing happiness.

In conclusion, this study highlights the multi-faceted nature of happiness and its intricate connections with cultural dimensions and government policies. Implementing practical recommendations and pursuing future research directions are essential to enhancing global well-being. As societies evolve, the author’s understanding of the complex interplay between culture, education, and happiness must adapt for a more holistic approach to human flourishing.

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