

Exploring the Impact of Taxation on Happiness and Quality of Life in Developed Nations

Edis Nokic
Wingate University

Kristin Stowe
Wingate University

Barry Cuffe
Wingate University

Lisa Schwartz
Wingate University

ABSTRACT

This study examines the relationship between tax policies and the welfare of society in thirty developed nations with primary concentration on Sweden. Based on the World Happiness Report, the OECD Better Life Index, and taxation data, the study uses regression analysis to investigate how rates of personal income tax, corporate tax, environmental tax, and value-added-tax affect well-being metrics. Results show a strong negative correlation between corporate tax rates and life measures. The study finds a positive correlation between life assessments and personal income tax rates. These findings highlight the role that tax policies play in determining the welfare of society and provide guidance to legislators who wish to use tax reform to enhance well-being.

Keywords: Happiness; Quality of life; Public expenditure; Taxation

Copyright statement: Authors retain the copyright to the manuscripts published in AABRI journals. Please see the AABRI Copyright Policy at <http://www.aabri.com/copyright.html>

INTRODUCTION

During the past decade, studies have investigated the major characteristics of happiness in larger welfare states. Socio-economic scientists have found that wealthy nations are happier nations, in which individuals have social support and subjective freedom (Oishi et al., 2012). Steinmo (2018) asked the question “Where would you rather live– Sweden or Sudan?” (p. 336). The answer depends upon preferences. People may want to live in Sudan; there are no taxes, markets operates freely, government regulations do not exist, and people may own a gun. Sweden has among the highest tax rates in the world with a government that puts high emphasis on the welfare state and regulation of guns and similar weapons.

Sweden ranks in the top ten happiest countries in the world, while Sudan ranks as one of the least happy countries in the world. Happiness is measured in different ways. In this case, indicators such as GDP per capita, social support, freedom to make life choices, generosity, perception of corruption, dystopia, and healthy life expectancy were taken into consideration (Helliwell et al., 2023). This research paper will focus upon Sweden, how the country manages to maintain high happiness levels, and how it compares to other developed countries.

Linking Happiness and Taxation

Although there are a wide range of determinants for happiness and wellbeing, this study will specifically focus on how taxation affects happiness. In addition to fulfilling the country’s fiscal requirements, the collection of taxes serves diverse purposes ranging economic to social to environmental objectives. There are multiple facets to the relationship between taxes and well-being (Vatavu et al., 2019; Bergh & Bjornskov, 2011). The perception individuals have of a nation’s taxation system depends on the public expenditure and the levels of individual and social satisfaction outcomes (Torstensson, 2023; Lubian & Zarri, 2011). The association between more-progressive taxation and higher levels of well-being is due to citizens' satisfaction with various public-sector goods, such as government funded health care programs, education, and mass transit (Buttrick & Oishi, 2023). Taxes and public expenditures can have a positive effect on the level of happiness (Sasmaz & Sakar, 2020). Happiness researchers can evaluate whether changes in tax rates will result in net gains or losses (Davies, 2015). While high taxes may create reductions in individuals' well-being due to payment burdens, the benefits from the social services and public goods provided lead to a collective increase in citizens’ well-being in the long run (Alm & Torgler, 2011).

It may be that the specific correlation is not between the total amount of government spending and the subjective well-being of a nation. Instead, a major factor for the happiness levels in a nation would be the degree of progressive taxation and inequalities in wealth (Fernandez-Albertos & Kuo, 2018). The Gini coefficient, which quantifies the degree of income or wealth distribution within a population, is a common indicator used for evaluating wealth inequality. Subjective well-being has been linked to lower levels of wealth inequality. There was an increase in Sweden’s income inequality index from roughly 0.2 to approximately 0.3 between 1991 and 2018 (SCB, 2020a). Gao and Chen (2022) argue that the index remained relatively modest, indicating that while income inequality in Sweden was trending upward, it was still within reasonable bounds.

Another perspective on ideal tax rates is offered by Gerritsen's (2016) research, which shows that modifications based on people's well-being considerations are crucial. Notably, larger rates are suggested for individuals who work 30 hours a week, and lower rates are suggested for individuals who work more or less than 30 hours a week (Gerritsen, 2016).

Andersson (2019) argues that a wider reach of taxes, such as carbon taxes, addresses social and environmental well-being in addition to economic goals. While carbon taxation is somewhat complex, it serves the purpose of discouraging citizens from using fossil fuels. The development of carbon pricing represents a significant move in the direction of promoting renewable energy sources, demonstrating the possibility for policies to reconcile the interests of the environment, society, and the economy. There are complex interrelationships among human well-being, environmental quality, and appropriate taxation (Criqui et al., 2019; Van Kamp et al., 2003).

Sweden's Taxes and Government Programs

In Sweden, a progressive tax system is implemented for personal income, as the Swedish government focuses on an optimal redistribution of income to provide citizens with high quality education, healthcare, and retirement plans (Andersson, 2022). Education is offered from early childhood through tertiary levels. Sweden's healthcare system provides services to all citizens at no or minimal out-of-pocket cost for the bulk of medical procedures. Sweden's healthcare system includes dental care (Sweden.se, 2023). With vast transportation networks supported by the government, infrastructure promotes mobility and connectivity throughout Sweden, mass transit is an affordable choice for commuters and tourists. It also lessens traffic and other negative effects on the environment (Sweden.se, 2023).

As an illustration of the importance placed on public welfare programs, in 2022 Social Protection received about one trillion SEK, which is about 20% of GDP. Social Protection mainly involves transfers to retirement plans, elder care, and assisted home care. 410 billion SEK went to Healthcare departments, while 390 billion SEK went to Public administration. Additionally, 380 billion SEK were allocated to education (Torstensson, 2024).

Swedish residents' employment income is subject to municipal income tax (Arvanus, 2024). The employment income tax is fixed at 32% for all income levels, while national income tax is levied at a rate of 0% for taxable income up to 614,000 SEK and 20% for income over that threshold (PwC, 2024). The total tax revenue equaled 40.7% of Sweden's GDP in 2023.

In this study, different components will be taken into consideration when assessing the happiness levels in Sweden and other developed countries. Taxation will serve as a subtheme as Sweden is a highly taxed country (Enache, 2023; Mengden, 2023).

METHODOLOGY

Data was collected from multiple sources. Three indices used were the OECD (Organization for Economic Cooperation and Development) Better Life Index for year 2023, WHR (World Happiness Report) Life Evaluations for years 2020-2022, and WHR Average Happiness Scores for years 2005-2022.

The OECD Better Life Index served as an extensive measure of well-being. It included several equally weighted factors: income, employment, education, environment, civic involvement, health, safety, and work-life balance. Each country was ranked on a scale from 1 to 10 for each variable, with higher scores denoting better well-being. The total OECD Better Life Index averaged each country's scores for the individual dimensions.

The WHR Life Evaluation values were based on a three-year average. This index served as a direct reflection of people's self-reported evaluations of their well-being for the years 2020-2022. The evaluations were gathered from the Cantril Ladder Life Evaluation Questions, which asked respondents to rank their level of overall life satisfaction on a 10-point scale. This index assesses relative happiness levels between various countries.

The WHR Average Happiness scores index from 2005 to 2022 used a pooled ordinary least squares (OLS) regression to explain how different socioeconomic factors and happiness levels in diverse nations relate to one another. Researchers evaluated the significance of factors like GDP per capita, social support, healthy life expectancy, freedom to make life decisions, generosity, and freedom from corruption related to national happiness levels over two decades.

Data on taxation included personal income tax, corporate tax, VAT (value-added tax), and environmental tax. These were collected from government websites and international databases. Environmental tax revenue as a percent of GDP and corporate tax rates were gathered from OECD. Personal income tax rates were collected from Trading Economics and VAT was collected from PwC's website. One measure utilized in some happiness research is GDP per capita. An increase in economic freedom and GDP per capita seem to increase the level of happiness (Gropper et al., 2011). However, GDP per capita is not reported separately in this study as it is included in other indices.

An overview of across different continental groups is provided in Table 1. The average OECD Better Life Index values for the year 2023, World Happiness Report (WHR) Life Evaluations values between years 2020-2022 and Happiness scores between 2005-2022 for Europe, the Americas, and Asia-Pacific are shown. The average taxation rates include the corporate tax rate, personal income tax rate, value-added tax rate, and environmental tax revenue (% of GDP).

The WHR Life Evaluation average score for all nations was 6.89, with a 0.46 standard deviation. The highest life evaluation score was 7.80 by Finland, while the lowest life evaluation score was 6.13 by Japan. The WHR Happiness Score average across all nations was 6.90, with a 0.44 standard deviation, which was very close to the average score of the WHR life evaluations. The highest WHR happiness score was 7.73 by Australia while Latvia maintains the lowest score at 6.05. The average OECD Better Life Index across all nations was 6.73, slightly lower than the two other indices, but with a higher standard deviation of 1.18. The highest OECD Better Index value was Iceland at 8.28 and the lowest score by far was Mexico at 3.42.

The average corporate tax rate across all countries was 23.8%. The highest corporate tax of the participating countries was 30% in Australia, Costa Rica, and Mexico, while the lowest corporate tax rate was held by Ireland at 12.5%. The mean personal tax rate across all nations was 42.1%. Finland held the highest personal income tax rate at 56.9%, while Estonia and Lithuania had the lowest rate at 20%.

The value-added tax is applied in all countries except the United States. The highest VAT rate was held by Sweden at 25%, while the lowest rate was held by Switzerland at 8.1%. Lastly, there was less deviation in environmental taxes. The highest rate was Slovenia's at 3.47% and lowest rate maintained by the United States at 0.62%.

All things considered, these descriptive statistics shared present a picture of the distribution of tax rates and happiness scores among the sample of nations.

RESULTS

Correlation & Trends

Correlations between the well-being metrics and tax rates are shown in Table 2. The three well-being metrics have a positive correlation with one another, indicating consistency. Higher personal income tax rates have positive correlations with higher reported happiness. The average OECD Better Life Index values demonstrate statistically significant negative association with the corporate tax rate. Perhaps the corporate tax rates are measuring an aspect of the business climate. There is a significant positive link between VAT rates and environmental tax revenue (% of GDP). VAT rates, however, do not significantly correlate with other happiness or well-being indicators. These relationships show how different tax policies may affect different aspects of well-being and other tax types.

The relationship between the average OECD Better Life Index values and the personal income tax rates for the year 2023 across several nations is shown in Figure 1. The nations are sorted in descending order of happiness. Sweden has the second highest reported OECD Better Life Index value, scoring 8.04 out of 10, and a personal income tax rate of 52.3%. With a personal income tax rate of 35% and an average OECD Better Life Index value of 3.4, Mexico sits at the bottom of the curve. The trendline's negative slope (-0.39) shows that OECD Better Life Index values tend to decline as personal income tax rates shrink.

The relationship between average OECD Better Life Index values and corporate taxes for the year 2023 in different nations is depicted in Figure 2. Nations are sorted in descending order of happiness. A trendline illustrates the inverse relationship between average OECD Better Life Index values and corporate taxes. Total well-being, as measured by the OECD Better Life Index, may be relatively less in nations with greater corporate tax loads. The trendline's positive slope (0.08) suggests that as the corporate taxes rise, the average OECD Better Life Index values tend to decline.

Regression Analysis

Multiple regression analysis is used to model the relationships between the different tax types and the well-being indices. Here is the general equation:

$$\text{Well-being Index}_i = \alpha_i + \beta_1 * \text{Corporate Tax Rate}_i + \beta_2 * \text{Personal Tax Rate}_i + \beta_3 * \text{Value Added Tax Rate}_i + \beta_4 * \text{Personal Tax Rate}_i$$

As shown in Table 3, all three models have highly significant ($p < 0.01$) intercepts, indicating that values in a neighborhood of reported averages for these happiness index metrics provide a reasonable estimate for countries. In general, the low R^2 values for all three models suggest that additional variables influence these metrics.

Model 1 for the OECD Better Life Index shows that the corporate tax rate and personal income tax rate have statistically significant effects on the Better Life Index values. The model revealed a significant, negative coefficient for corporate tax rate and a significant positive one for personal tax rate. For example, a 1 percentage point increase in the personal tax rate is predicted to generate a rise in the Better Life score of 0.06 index points. Model 2 utilizing WHR Life generated a slightly stronger linear fit, with slightly reduced, same-signed coefficients as the first model. Model 3 using the World Happiness Report (WHR) score produced a poor overall model that lacked a significant F.

The regression analyses highlight the predictive value of personal tax rates across well-being metrics. Notably, these rates have an impact on both the WHR Life Evaluation and the OECD Better Life Index values, highlighting the complex relationship between tax policies and subjective well-being indicators.

LIMITATIONS & FUTURE RESEARCH

The well-being metrics utilize secondary data sources, including the World Happiness Report and the OECD Better Life Index. There may be other metrics with less overlap. Furthermore, the possible effects of other taxation measures and policy aspects may be overlooked due to the selection of only three taxation. The results may have been affected by the inclusion of a greater number of nations in some continental groups—such as Europe—than in others, such as the Asia-Pacific or Americas region. Future studies could examine different taxation measurements and policy factors. Furthermore, the study is limited by its reliance on cross-sectional data. Using longitudinal research techniques may provide a more accurate assessment of the relationships. Despite these limitations, the research highlights the value in more study and careful policy considerations while providing information on the complicated relationship between taxation policies and social well-being.

CONCLUSION

This study, which included thirty developed countries and a primary focus of Sweden, found significant relationships between tax rates and measures of well-being. Lower life satisfaction indicators were linked to higher corporate tax rates, while well-being was positively correlated with higher personal income tax rates. By implementing focused reforms, like modifying the rates of corporations and personal income tax and/or efficiently spending on programs valued by residents, governments could enhance the general standard of living for their populace.

REFERENCES

- Aknin, L., Layard, R., et. al. (2022). Global Happiness and Well-Being Policy Report. https://s3.amazonaws.com/happinesscouncil.org/GHC_2022.pdf.
- Alm, J., & Torgler, B. (2011). Do ethics matter? Tax compliance and morality. *Journal of Business Ethics*, 101, 635-651.
- Andersson, P. F. (2022). Taxation and left-wing redistribution: The politics of consumption tax in Britain and Sweden. *Comparative Politics*, 54(2), 279-301.
- Andersson, J. J. (2019). Carbon taxes and CO2 emissions: Sweden as a case study. *American Economic Journal: Economic Policy*, 11(4), 1-30.
- Arvanus, S. (2024). PwC: Employment income tax for residents. *Individual - Taxes on personal income*. <https://taxsummaries.pwc.com/sweden/individual/taxes-on-personal-income>.
- Bergh, A., & Bjørnskov, C. (2011). Historical trust levels predict the current size of the welfare state. *Kyklos*, 64(1), 1-19.
- Buttrick, N., & Oishi, S. (2023). Money and happiness: A consideration of history and psychological mechanisms. *Proceedings of the National Academy of Sciences*, 120(13).
- Criqui, P., Jaccard, M., & Sterner, T. (2019). Carbon taxation: A tale of three countries. *Sustainability*, 11(22), 6280.
- Davies, W. (2015). *The happiness industry: How the government and big business sold us well-being*. Verso books.
- Enache, C. (2023). Corporate Tax around the World, 2023. *Tax Foundation*. <https://taxfoundation.org/data/all/global/corporate-tax-rates-by-country-2023/>.
- Esteban Ortiz-Ospina and Max Roser (2016) - "Taxation". <https://ourworldindata.org/taxation>.
- Fernández-Albertos, J., & Kuo, A. (2018). Income perception, information, and progressive taxation: Evidence from a survey experiment. *Political Science Research and Methods*, 6(1), 83-110.
- Gao, J., & Chen, H. (2022). The Trend to Widening Wealth and Income Inequality in Sweden and its Causes. https://www.scienceopen.com/document_file/aafcffcd-6618-4ffd-bcbe-89589c1208a5/ScienceOpen/WRPE_13_1_Gao%20and%20Chen.pdf.
- Gerritsen, A. (2016). Optimal taxation when people do not maximize well-being. *Journal of Public Economics*, 144, 122-139. <https://www.sciencedirect.com/science/article/abs/pii/S0047272716301530>
- Gropper, D. M., Lawson, R. A., & Thorne Jr, J. T. (2011). Economic freedom and happiness. *Cato J.*, 31, 237.
- Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2023. World Happiness Report 2023. *New York: Sustainable Development Solutions Network. Gallup World Poll*. <https://happinessreport.s3.amazonaws.com/2023/WHR+23.pdf>.
- Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020. World Happiness Report 2020. *New York: Sustainable Development Solutions Network. Gallup World Poll*.
- Lubian, D., & Zarri, L. (2011). Happiness and tax morale: An empirical analysis. *Journal of Economic Behavior & Organization*, 80(1), 223-243. <https://www.sciencedirect.com/science/article/abs/pii/S0167268111000953>.
- Mengden, A. (2023). International Tax Competitiveness Index 2023. *Tax Foundation*. <https://taxfoundation.org/research/all/global/2023-international-tax-competitiveness-index/>.

- OECD Better Life Index (2023). <https://www.oecdbetterlifeindex.org/#/21111111111>.
- OECD Data. (2023). Environmental tax. <https://data.oecd.org/envpolicy/environmental-tax.htm>.
- Oishi, S., Schimmack, U., & Diener, E. (2012). Progressive taxation and the subjective well-being of nations. *Psychological science*, 23(1), 86-92.
- PwC Worldwide Tax Summaries. (2023). Value-added tax (VAT) rates. <https://taxsummaries.pwc.com/quick-charts/value-added-tax-vat-rates>
- Şaşmaz, M., & Şakar, E. (2020). The effect of taxes and public expenditures on happiness: Empirical evidence from OECD countries. *International Journal of Advanced and Applied Sciences*, 7, 130-136.
- Statista, (2022). Public expenditure in Sweden in 2022, by function. <https://www.statista.com/statistics/530145/swedenpublic-expenditure-byfunction/#:~:text=In%20total%2C%20the%20government%20spent,by%20enterprise%20and%20economic%20development.>
- SCB. 2020a. "Income Inequality Indicators, Equalised Disposable and Primary Income including All Capital Income, 1991–2018, 2018 Prices." <https://www.scb.se/content/assets/af5d03d4fbc94a7cb1e1fa9223035dec/0a-indikatorer-inkomstfordelning-1975-2018-en.xlsx>.
- Steinmo, S. H. (2018). *The leap of faith: the fiscal foundations of successful government in Europe and America* (p. 336). Oxford University Press.
- Sweden, (2023). Welcome to Sweden. <https://sweden.se/>.
- Torstensson, S. (2024). Offentliga sektorns utgifter (Public sector spending). *Ekonomifakta* <https://www.ekonomifakta.se/fakta/offentlig-ekonomi/offentlig-sektor/offentliga-sektorns-utgifter/#:~:text=De%20offentliga%20utgifterna%20motsvarar%20cirka,tredjedel%20av%20de%20offentliga%20utgifterna.>
- Torstensson, S. (2023). Skattekvot (Tax quota). *Ekonomifakta*. <https://www.ekonomifakta.se/Fakta/skatt/Skattetryck/Skattetrycket-historiskt/>.
- Trading Economics (2023). List of Countries by Personal Income Tax Rate. <https://tradingeconomics.com/country-list/personal-income-tax-rate>.
- Van Kamp, I., Leidelmeijer, K., Marsman, G., & De Hollander, A. (2003). Urban environmental quality and human well-being: Towards a conceptual framework and demarcation of concepts; a literature study. *Landscape and urban planning*, 65(1-2), 5-18.
- Vatavu, S., Lobont, O. R., Stefea, P., & Brindescu-Olariu, D. (2019). How taxes relate to potential welfare gain and appreciable economic growth. *Sustainability*, 11(15), 4094.
- World Happiness Report. (2023). <https://worldhappiness.report/ed/2023/>.
- World Population Review. (2023). <https://worldpopulationreview.com/country-rankings/highest-Taxed-countries>.

APPENDIX

Table 1. Summary Statistics

	WHR Life Evaluation	WHR Happiness Score	OECD Better Life Index	Corporate Tax Rate	Personal Tax Rate	VAT Rate	Environmental Tax (% of GDP)
Europe Mean	6.95	6.91	7.03	22.05	43.06	21.05	2.18
Americas Mean	6.63	6.83	5.50	27.80	34.00	14.50	1.16
Asia-Pacific Mean	6.95	6.96	6.72	27.69	47.49	13.00	1.56
Sample Mean	6.89	6.90	6.73	23.76	42.14	18.57	1.93
Std. Deviation	0.46	0.44	1.18	4.55	9.98	5.42	0.73
Minimum	6.13	6.05	3.42	12.50	20.00	5.08	0.62
Maximum	7.80	7.73	8.28	30.00	56.95	25.00	3.47

NOTE: Tax Rates shown in %. Ratings for Well-being and Happiness: 0 - 10, 0 = worst possible, 10 = best possible. N = 30 countries.

European Group: Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Slovenia, Spain, Sweden, Switzerland, United Kingdom

Americas Group: Canada, Chile, Costa Rica, Mexico, United States

Asia-Pacific Group: Australia, Israel, Japan, New Zealand

Table 2. Correlation among Well-being/Happiness Indices and Tax Rates

Variable	OECD Better Life Index	WHR Happiness Score	WHR Life Evaluation	Corporate Tax Rate	Personal Tax Rate	VAT Rate
WHR Happiness Score	0.42**					
WHR Life Evaluations	0.74***	0.88***				
Corporate Tax Rate	-0.27**	-0.18	-0.21			
Personal Tax Rate	0.36**	0.31*	0.45***	0.15		
VAT Rate	0.08	0.21	0.17	-0.49***	0.20	
Environmental Tax Revenue	0.06	0.04	0.05	-0.28**	0.18	0.55***

NOTE: Statistical significance shown as: ***p<0.01; **p<0.05; *p<0.10. N = 30 countries

Table 3: Regression Analysis

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
Independent Variables	OECD Better Life Index	WHR Life Evaluation	WHR Happiness Score
Intercept	8.15 0.00***	6.92 0.00***	6.76 0.00***
Corporate Tax	-0.12 0.04**	-0.03 0.10*	-0.02 0.33
Personal Tax	0.06 0.01**	0.02 0.01**	0.02 0.09*
VAT	-0.05 0.35	0.00 0.85	0.01 0.66
Environmental Tax	-0.05 0.87	-0.07 0.56	-0.09 0.51
Adjusted R-Squared	0.16	0.18	0.03
Significance F	0.08*	0.06*	0.32
Observations	30	30	30

NOTE: ***p<0.01; **p<0.05; *p<0.10.

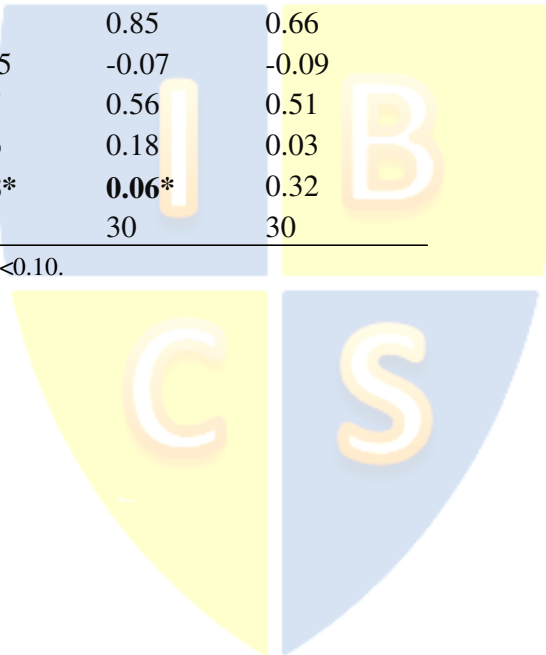


Figure 1. OECD Better Life Index Values & Personal Income Tax Rates

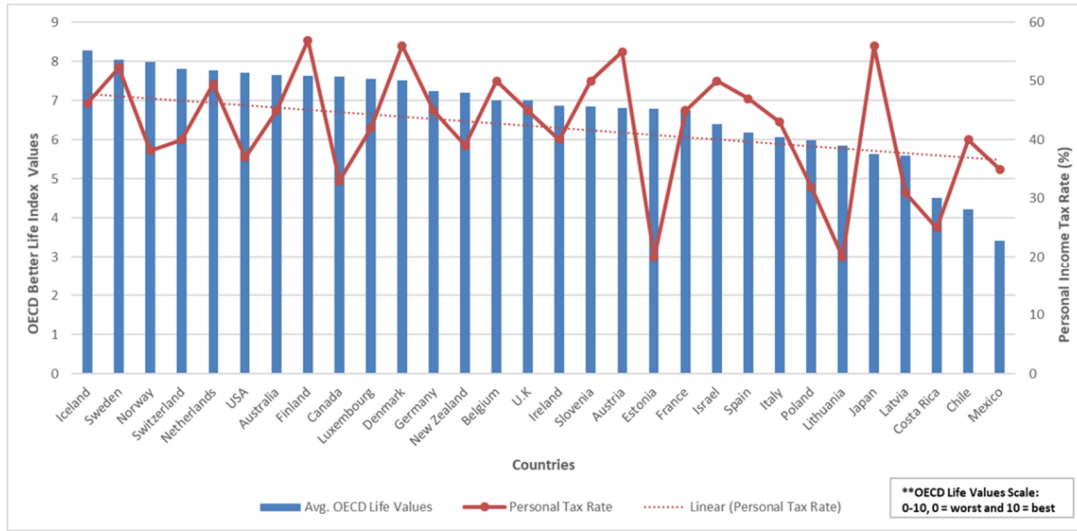


Figure 2. OECD Better Life Index Values & Corporate Tax Rates

