

Understanding Subjective Wellbeing: A study based on World Value Survey data.

Introduction and Literature review:

The concept of wellbeing and life satisfaction has been at the center of understanding and fostering human development. In social sciences, traditionally, study of subjective well-being has been exclusively seen as the domain of psychology however it is important to understand that is an equally the domain of sociology as well.¹ Primarily, it tells us about the quality of social system people live in. and secondly, it is a determinant of social behavior.²

Sociologically speaking, well-being hasn't been covered at length. There are several reasons for it. Firstly, it does not correspond to collective understanding. Secondly, Sociologists tend to study the ills of society and how to correct them compared to concepts of happiness and life-satisfaction whose definition can be vague and contextual. It can range from Comte's definition : "state of intellectual enlightenment with sacral feelings of inclusion that comes from social progress"³ to as vague as "experiencing the level of life satisfaction and the emotions of joy or anxiety".⁴ For this paper, I will be relying on the definition provided by Ruut Veenhoven. According to him, life satisfaction is not merely a cognitive appraisal but at the same time "an overall judgement of life that draws on two sources of information a) contentment and b) hedonic

¹ Veenhoven, R. (2008). Sociological theories of subjective well-being. In *The science of subjective well-being*. (pp. 44–61). The Guilford Press.

² Veenhoven, R. (2008). Sociological theories of subjective well-being. (pp. 58).

³ Plé, B. (2000). Auguste Comte on Positivism and Happiness. *Journal of Happiness Studies*, 1(4), 423–445. <https://doi.org/10.1023/A:1011597222119>

⁴ Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55(1), 34–43. <https://doi.org/10.1037/0003-066X.55.1.34>

level of affect”⁵⁶. Veenhoven considers “Subjective Well-being” as being equivalent to “overall happiness” and “life satisfaction”.⁷

While framing this paper, or in general understanding subjective well-being, it is important to answer the following questions. Primarily, what is subjective well-being? Secondly, how do we measure the current level of our well-being? Thirdly, what are the conditions that foster the growth of subjective well-being in the society? And lastly, what are the consequences for subjective well-being in the society?⁸ The first question has been answered and the others will be explored throughout the paper. Since this paper relies on Veenhoven’s conception of subjective well-being which equalizes the term with life-satisfaction, the terms will be used interchangeably. The first surveys in this regard were carried out in the USA, which emphasized on mental health, and subsequently with time the topic became popular and the literature on well-being increased accordingly.⁹

Well-being traditionally has been associated with basic objective socio-economic indexes. Objective metrics include Gross Domestic Product (GDP), Physical Quality of Life Index (PQLI), Human Development Index (HDI) etc.¹⁰ All of these methods either involve objective parameters which are insufficient as they don’t account for feelings and emotions.¹¹ The paper will focus on subjective as well as objective indexes to measure well-being. Subjective well-being employs a multi-dimensional approach including cognitive judgements of life satisfaction and affective

⁵ Veenhoven, R. (1984). *Conditions of Happiness*. <https://doi.org/10.1007/978-94-009-6432-7>

⁶ Veenhoven, R. (2008). (Pp. 45).

⁷ Ibid.

⁸ Ibid.

⁹ Veenhoven, R. (1996). THE STUDY OF LIFE SATISFACTION. In W. V. Saris, *A comparative study of satisfaction with life in Europe* (pp. 11-48)

¹⁰ Bandura, P. C. (2008). *Measuring Subjective Wellbeing: A Summary Review of the Literature*.

Retrieved from undp.org.

¹¹ Sumner, A. (2006). *Economic Well-being and Non-economic Well-being*. Basingtoke: Palgrave MacMillan.

evaluations of moods and emotions.¹² Individual results are key to understanding the well-being of a population. This paper relies on the data from the 7th edition of World Value Surveys which compiles results from over 64 countries.¹³¹⁴ The recent wave concluded in 2022.¹⁵

The paper makes certain assumptions about the variables impacting well-being and will test them through regression analysis to verify whether they match with the available literature. It is important to keep in mind that subjective well-being also has inherent limitations as we can't have a similar scale (same questionnaire) to analyze different cultures throughout the world. The paper will however try to minimize it by focusing on questions and response which can be generalized to the maximum extent. Economic indicators such as income, class etc. are assumed to be a primary determinant of well-being and life satisfaction; however, at times it can be relative indicators which can be more meaningful compared to absolute values e.g. in case of income.¹⁶ The paper will also include norms and values as indicators of subjective well-being as they form a key in understanding human actions and moods.¹⁷ Basic demographic variables such as Age, Sex and marital status are also assumed to have an impact on subjective well-being and will be tested in the regression analysis.¹⁸ Health, family values, and trust in social and political institutions are also assumed to have a direct relation on well-being of an individual and will be analyzed

¹² McGillivray, M., & Clarke, M. (2006). *Human well-being: Concepts and measures*.

¹³ WVS Database. (n.d.). Retrieved January 23, 2024, from <https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp>

¹⁴ Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen (eds.). 2022. *World Values Survey: Round Seven - Country-Pooled Datafile Version 5.0. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVS Secretariat*. doi:10.14281/18241.20

¹⁵ Ibid.

¹⁶ Easterlin, R. (1974). Does Economic Growth Improve the Human Lot?

In P. D. Reder, *Nations and Households in* . New York and London: Academic Press.

¹⁷ Akerlof, G. (2007). The Missing Motivation in Macroeconomics. *American Economic Review*, 5-36.

¹⁸ Frey, B. S. (2000). Happiness, Economics and Institutions. *The Economic Journal*, 918-938.

accordingly.¹⁹ With these assumptions on the data from 7th wave of World value Survey the regression results will work in favor of the assumptions in popular literature.

Data and Methodology:

Starting from 1981, the World Value Survey has been conducting surveys encompasses questions on a wide range of topics; social, cultural, political, economic, religious values etc. of the respondents.²⁰ It is one of the most coherent and consistent available data sources that focus on places around the world. This paper focuses on the latest edition starting from mid-2017 to the end of 2021.

This paper on subjective well-being analyzes the topic through a range of variables. The dependent variable is Q49 of the survey which goes as follows “All things considered, how satisfied are you with your life as a whole these days”.²¹ The scale of answer ranges from one to ten; one indicating lowest satisfaction and ten complete satisfactions.

The independent variables start from basic demographics such as Age (Q262), Sex (Q260), marital status (Q273). Other variables inform economic, religious and political attitudes of the respondent.

Table 1. **Variables involved in the model.**

Variable	Question	Variable type
Q49 (Dependent)	Life satisfaction on range of 1-10 (1; low ; 10 high)	Ordinal
Q262	Age	Continuous
Q260	Sex (Male or Female)	Nominal
Q273	Marital Status (Married, living together as married, divorced, separated, widowed, single)	Nominal

¹⁹ Ibid.

²⁰ *WVS Database*. (n.d.). Retrieved January 23, 2024

²¹ Ibid.

Q164	Importance of God on a range of 1-10 (1; low ; 10 high)	Ordinal
Q250	Importance to live in a democratic country 1-10 (1; low ; 10 high)	Ordinal
Q287	Class (1- upper class to 5 – lower class)	Ordinal
Q45	Respect for authority on a range of 1-3 (1; high, 3; low)	Ordinal
Q288	Income your household belongs on a range of 1-10 (1; low ; 10 high)	Ordinal
Q275	Education on a range of 0-8 (0: no education, 8: doctoral education)	Ordinal
Q47	Health status on a range of 1-5 (1:very good, 5 very poor)	Ordinal

In the table above Q49 (Life satisfaction) is the only dependent variable, and all others are independent variables. The study will start with cleaning the data and making it operational for the analysis. Apart from descriptive analysis, the paper will have to utilize Spearman rank correlation given the nature of dependent and independent variables (as categorical and ordinal variables).²² Also given the nature of variables, the best regression model for such a group of variables is Ordered logistic regression model.²³ However values have to be operationalized in this regard. The 10 level Likert scale will be converted to simple categories, using dummy variables, while preserving the order required for the ordered logistic regression. Likert scale responses ranging from one to ten are categorized into three categories. Values 1 to 3 as one group; 4 to 7 as another, and 8-10 as another. For example, for our dependent variable Q49 (“How satisfied you are in

²² Spearman Rank Correlation Coefficient. (2008). In *The Concise Encyclopedia of Statistics* (pp. 502–505). Springer New York. https://doi.org/10.1007/978-0-387-32833-1_379

²³ Grilli, L., & Rampichini, C. (2014). Ordered Logit Model. In A. C. Michalos (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 4510–4513). Springer Netherlands. https://doi.org/10.1007/978-94-007-0753-5_2023

life...?”), values 1-3 would be low satisfaction, 4-7 somewhat satisfied and 8-10 completely satisfied. This categorization would make model more comprehensive.

For independent variables of which except Age (Q262) all are categorical i.e. ordinal or nominal a similar approach to operationalization of Likert scale values would be followed. For example, for the question Q250 (“how important it is for you to live in a democratically governed country?”), responses in the range of 1-3 would be categorized as “low significance”, 4-7 as “somewhat significant”, and 8-10 as “highly significant”. Similar categorization is applied to Income (Q288), importance of God (Q164). For variables of 5 level Likert scales such as Health (Q47) and Class (Q287), values 1-2 are classified as good or high, 3 as middle or normal, and 4,5 as low. For the question of authority (Q45) and Sex (Q260) there is no such need as it has limited options on Likert scale.

For the independent variable of education, the study will categorize anything under bachelor’s degree as low (0-5 responses on Likert scale), completion of bachelor’s degree as mid (6), and above bachelor’s degree as high (7-8). This categorization is based on ease of access to educational institutional in the current times.

The paper will provide basic descriptive, multicollinearity tests and spearman correlation coefficients after which it will proceed to regression analysis. The Ordered Logistic regression analysis will be presented and interpreted for individual variable along with other key coefficients. Also, it is important to mention that values have not been flipped and thus should be interpreted while keeping the questionnaire in mind.

Results and Discussions:

Starting with the multicollinearity tests, the variation index factor (VIF) for all of our variables is under 10 indicating multicollinearity condition is qualified.

Table 2: **VIF indexes of all variables.**

Variable	VIF
0 const	110.731982
1 Q49	1.180923
2 Q288	1.264284
3 Q275	1.399039
4 Q250	1.107424
5 Q164	1.233572
6 Q287	1.313162
7 Q262	1.153807
8 Q260	1.031062
9 Q273	1.074866
10 Q45	1.104590
11 Q47	1.139999

Now proceeding towards the Spearman rank correlation tests, the below table indicates the coefficients for various variables.

Table 3. Spearman's Correlation Coefficients.

Variable 1	Variable 2	Rho value	P value
Life sat. (Q49)	Q288 (income)	0.17139698656237717	0.0
Life sat. (Q49)	Q275 (education)	--	--
Life sat. (Q49)	Q250 (democracy)	0.1538938189385846	0.0
Life sat. (Q49)	Q164 (God)	0.12690842517289913	0.0
Life sat. (Q49)	Q287 (class)	-0.1262742450991426	0.0
Life sat. (Q49)	Q262 (Age)	0.01877321198947857	8.180601378468564e-09
Life sat. (Q49)	Q260(sex)	0.010666831111803584	0.0010556078327589146
Life sat. (Q49)	Q273(Marital status)	-0.04813923903157425	1.714808985544932e-49
Life sat. (Q49)	Q45(Authority)	-0.087731409726767	1.9693847048885364e-160
Life sat. (Q49)	Q47(Health)	-0.27566874951913917	0.0

While interpreting the correlation coefficients for the variables most of the associations are weak; however apart from Education (Q275) they are all statistically significant. For example, coefficients between Life satisfaction and income is positive ratifying the findings of the literature.²⁴ A similar result is seen in variables pointing to belief in God, democratic rule, belonging to an economic class, authority etc. which is again in sync with the popular literature. Education variable doesn't offer any results which is surprising here. The data requires further analysis in the form of Ordered Logistic Regression.

Table 4. Measuring Overall life satisfaction from world Value Survey Wave 7(2017-20), Ordered Logistic Regression.
Dependent Variable: Overall satisfaction with life (Q49, scale 1-10 1—low, 10-high)

Accuracy: 0.27

OLS Regression Results

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Dep. Variable:	Q49	R-squared:	0.146
Model:	OLS	Adj. R-squared:	0.141
Method:	Least Squares	F-statistic:	28.47
Date:	Tue, 21 Jan 2024	Prob (F-statistic):	7.83e-51
Time:	21:26:39	Log-Likelihood:	-3316.5
No. Observations:	1681	AIC:	6655.
Df Residuals:	1670	BIC:	6715.
Df Model	10		
Covariance Type:	nonrobust		

	coef	std err	t	P> t	[0.025	0.975]

const	7.2754	0.420	17.313	0.000	6.451	8.100
Q288	0.1514	0.021	7.258	0.000	0.111	0.192
Q275	-0.0471	0.023	-2.066	0.039	-0.092	-0.002
Q250	0.0496	0.022	2.233	0.026	0.006	0.093
Q164	0.0400	0.013	3.175	0.002	0.015	0.065
Q287	-0.0480	0.048	-1.000	0.317	-0.142	0.046
Q262	0.0111	0.003	4.305	0.000	0.006	0.016
Q260	0.1607	0.082	1.963	0.050	0.000	0.321

²⁴ Easterlin, R. (1974). Does Economic Growth Improve the Human Lot? New York and London: Academic Press.

Q273	-0.0315	0.023	-1.392	0.164	-0.076	0.013
Q45	-0.2655	0.069	-3.836	0.000	-0.401	-0.130
Q47	-0.5567	0.050	-11.240	0.000	-0.654	-0.460
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Omnibus:	537.801		Durbin-Watson:		2.001	
Prob(Omnibus):	0.000		Jarque-Bera (JB):		2244.760	
Skew:	-1.490		Prob(JB):		0.00	
Kurtosis:	7.813		Cond. No.		522.	
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The model is statistically highly significant with R-Square value at 0.146. All the results except Class (Q287) and marital status (Q273) are highly statistically significant. Let's attempt to interpret the results. Starting with income (Q288) the positive coefficient indicates that for every one unit increase in income (Q288) is associated with a 0.1514 increase in the log-odds of moving to a higher category of happiness; given all other variables are kept constant and the result is highly statistically significant. Our assumption in this regard was true; as results reinforce the popular literature.²⁵

Similarly for the importance of God in one's life (Q164), the coefficient indicates a positive association by 0.04 units. Health (Q47) showcases the maximum impact (the negative value is accounted by the fact that it uses a reverse form in which lower value indicates good health and higher value bad health). Every 1 unit increase in health (Q47) is associated with a 0.55 units increase in the log-odds of moving to a higher category of subjective well-being; given all variables are kept constant and the result is highly statistically significant. This is also in line with literature.²⁶ Except for class and marriage; none of the results are surprising.

²⁵ Sumner, A. (2006).

²⁶ McGillivray, M., & Clarke, M. (2006). *Human well-being: Concepts and measures*.

Conclusion, limitations, and future scope of work:

The paper attempted to measure the subjective well-being based on data from the 7th wave of world value survey, performing both descriptive and inferential statistics. The most of results were in line with the expectations. Except for marital status (Q273) and socio-economic class (Q287) all the results were highly statistically significant. Correlation analyses was also in line with the literature and indicated highly statistically significant results.

The results are useful; however, at the same time the paper has shortcomings. Deploying a similar questionnaire for all the audiences irrespective of culture and region is problematic. The norms and values which inspire this question arise from western understanding. Also, we had highly statistically significant results owing to the convergence of large-scale data which didn't take into account various differences. The same results don't appear when we focus on smaller countries or when we do a comparative analysis. Other limitations are the limitations of language, several questionnaires are in languages specific to a country. If we account for these differences, we can have a comprehensive analysis of any form including subjective well-being. Also, apart from issues with the data formation and handling; there are epistemological issues at hand e.g. is subjective well-being a part of sociological study or should it be entirely studied under the disciplinary notions of psychology. Also, how do we measure it and what are the consequences of having an improvement in subjective well-being. These are all important questions and need to be analyzed under the framework of sociology.

To conclude, subjective well-being, can be an important metric for policy makers, analysts, and governments throughout the world. It can be employed to make more fulfilled individuals who would then contribute to a happier society. However, at the same time, we should address the issues e.g. how these questions are prepared and do they apply for all people. An interesting example in this regard can be of a small South-Asian country named Bhutan. The government in Bhutan have historically had happiness index based on their own values.²⁷ It can offer an interesting analysis to make our study more efficient and contextual.

²⁷ *Bhutan's Gross National Happiness Index* | OPHI. (n.d.). Retrieved January 24, 2024, from <https://ophi.org.uk/policy/bhutan-gnh-index/>

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