





# THE ROLE OF MACRO ECONOMIC FACTORS IN SHAPING HAPPINESS IN WESTERN EUROPE

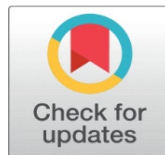
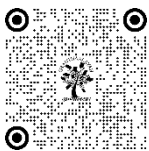
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## ABSTRACT

The present study examines the correlation between macroeconomic variables, specifically Gross Domestic Product (GDP) and Per Capita GDP, and their impact on happiness levels as measured by the Western European Happiness Index. The study uses statistical methods like ANOVA, multiple regression, and variance inflation factor (VIF) analysis to examine data from Western European countries. The results indicate a statistically significant negative association between GDP and the Happiness Index, but there is a positive but statistically insignificant positive association between per capita GDP and Happiness index. According to the study, GDP has a major impact on happiness levels, while per capita GDP has a little impact. By concentrating on macroeconomic determinants in a continental context, this study bridges research gap to an extent and provides guidance for policymakers looking to improve national happiness.

**Keywords:** Gross Domestic Product, Per capita Gross Domestic Product, Happiness Index, Western European Countries

## 1. INTRODUCTION

Mankind has been in search of Happiness ever since the dawn of human civilization. However happiness has remained quite elusive and more it remains so greater is the curiosity to explore the field of happiness." Longman's Dictionary (2005) defines happiness as a "state of being happy," which indicates "a sense of pleasure, i.e. something is excellent or correct, like being content with something, not worried about being lucky and performing well." whereas Merriam Webster Dictionary defines Happiness as "a state of well-being and contentment" and "a pleasurable or satisfying experience" More often than not Happiness is confused with a form of mood or emotion or satisfaction. Some psychologists associate happiness with positive emotions. The said set of emotions may be positive with some individuals and may be negative for some other individuals. Positive emotions and negative emotions may as well change

with change in time or even change in circumstances. At times Happiness is commonly mistaken with a particular attitude, feeling, or level of pleasure. Some psychologists link happiness with sense of satisfaction derived from objectives achieved. It is widely believed that happy individuals tend to have better productivity.

Similarly when citizens of a country are happy they tend to contribute more to national income and wealth. Many countries therefore try to achieve higher happiness index by implementing various economic and non economic measures. Happiness of countrymen is therefore treated as an important parameter for national productivity and growth across the globe.

## 2. LITERATURE REVIEW

Happiness has been extensively researched by academics. The following are some of the significant research contributions: S. Jalal Sarker, A. Crossman, and P. Chinmeteeptuck (2003) in their study found that tenure has a stronger correlation with overall work satisfaction than does employee age. Additionally, there is a strong correlation between tenure and contentment with job, pay, and fringe benefits; however, the impact of tenure on satisfaction decreases significantly with age. Pors, N.O. (2003) based on several inquiries and comments, the author developed a large number of composite factors. Their concerns include stress, job autonomy, perceptions of management styles, and actual job content. At least some of Hofstede's theories about cultural differences are supported by the research. They are able to explain some of the most important differences, but not all of them. It is also evident that factors like stress and the ability to make decisions are significantly influenced by nationality. According to the research, one intervening variable could be the ways in which different countries restructure the public sector. A generic theory of work satisfaction is partially rejected in the study's conclusion. Although the components are generally the same, background variables like the nation, the size of the hiring organization, and the task mix of the job alter the weighting of the single item and its significance. J. GarcaBernal, A. GargalloCastel, M. MarzoNavarro, and P. RiveraTorres (2005) in their study suggested that there is room for improvement in Spanish workers' job satisfaction. Additionally, research indicates that job happiness is influenced by four factors: "economic considerations," "interpersonal connections," "working circumstances," and "personal fulfilment." Men and women take into account the same attributes, but the degree to which each dimension has an impact differs by subsample, according to a follow-up study based on worker gender. Herbohn, K. (2005) examined the connection between the career decisions of female accountants to leave their current position, transition to part-time work, or leave the accounting field and their satisfaction levels. For female accountants, lower work satisfaction was linked to higher intentions to leave, which is in line with a large body of organizational and accounting literature. S.M. Jensen and F. Luthans (2006) in their study revealed the strongest single predictors of employee job satisfaction ( $t=6.453$ ,  $p=0.000$ ), organizational commitment ( $t=6.665$ ,  $p=0.000$ ), and work pleasure ( $t=5.488$ ,  $p=0.000$ ) according to employees' opinions of authentic leadership. J.R. Goris (2007) found that Communication satisfaction had strong support as a key predictor of both performance and satisfaction, but receiving little support as a moderator of the individual-job congruence model. Wright, T.A., and Cropanzano, R. (2007) discovered that employees who are happy at work do better and are more likely to stick around than those who are not. Work satisfaction is the most widely used metric to measure happiness in the management sciences. This perspective is quite constrictive. Gustainienė, L. and Endriulaitienė, A. (2009) in their study concluded that when it came to overall extrinsic work satisfaction, male sales managers fared better than female ones. In particular, their social service and accomplishment (intrinsic satisfaction) were the main sources of discontent among younger male managers. Compared to managers with less education ( $n=61$ ), sales managers with higher levels of education ( $n=139$ ) expressed greater satisfaction with organizational responsibility (3.640.75 vs. 3.250.80, respectively) and inventiveness (3.760.87 vs. 3.430.95, respectively). Yi Wang, Ronnel B. King, and Joseph Y. Haw (2024) found that generally speaking, need-supportive education was linked to improved wellbeing in a variety of political, social, and cultural contexts. The strength of the correlations varied slightly among macro-contexts, though. A few cultural groupings also showed slight departures from the overall trend.

## 3. RESEARCH GAP

Several researchers have been undertaken to study happiness of individuals in various sectors across the nation taking into account micro factors. Research studies to examine happiness with special focus on macro factors such as gross domestic product (GDP) and per capita gross domestic product (Per Capita GDP) etc. in continental context are rare. This paper attempts to address the connecting platform to an extent.

#### 4. RESEARCH OBJECTIVES

This research study attempts to investigate the relationship between macro factors such as Gross Domestic Product(GDP) and Per Capita Gross Domestic Product(Per Capita GDP) with happiness level represented by happiness index. It also attempts to study the degree of influence they exercise over the happiness index.

#### 5. HYPOTHESIS DEVELOPMENT

The hypothesis formulated for this research paper are mentioned below:

- 1) Ho: Gross Domestic Product does not influence Happiness Index  
Ha: Gross Domestic Product does influence Happiness Index
- 2) Ho: Per Capita Gross Domestic Product does not influence Happiness Index  
Ha: Per Capita Gross Domestic Product does influence Happiness Index

#### 6. RESEARCH METHODOLOGY

Methodology in a research study essentially involves systematic investigation of the concerned topic so that results of research study are reliable. It also enhances existing body of knowledge in the field. In this research paper only west European nations viz. Germany, France, Netherlands, Belgium, Austria, Switzerland and Luxembourg are considered. The data pertaining to Gross Domestic Product (GDP), Per Capita Gross Domestic Product(Per Capita GDP) and Happiness Index were collected for period of nine years. From amongst these variables Per Capita Gross Domestic Product is taken as independent variable while Gross Domestic Product and Per Capita Gross Domestic Product were taken as independent variables. The data so collected was analyzed using various statistical techniques such as ANNOVA, Descriptive statistics and Multiple Regression. F Test and Multi Co Linearity tests viz. Variance Inflation Factor (VIF) were carried out to check reliability of results.

#### VII ANALYSIS AND INTERPRETATION

(1) Table – 1 depicts the standardized regression co-efficients of the independent variables with their corresponding direction, values and significance level. The standardized regression coefficient of GDP, as stated in Table -1, is – 0.333. It means GDP has negative association with Happiness Index. It further means GDP and Happiness Index move in the opposite direction. If one of them increases the other will decrease and vice versa. However, its significance level of 0.034 makes it statistically relevant. The evidence therefore points out that null hypothesis H<sub>0</sub> (GDP) be rejected and the alternate hypothesis H<sub>a</sub> (GDP) be accepted. This clearly suggests that GDP per se exerts more influence on Happiness Index.

(2) The standardized regression coefficient of Per Capita GDP stands at + 0.187. This leads us to believe that Per Capita GDP has positive association with Happiness Index meaning thereby both the variables move in the same direction. This suggests that if Per Capita GDP increases Happiness Index will also increase. Its significance level of 0.224 does not permit it to be significant variable affecting Happiness Index. The evidence therefore suggests that null hypothesis H<sub>0</sub> (Per Capita GDP) be accepted and the alternate hypothesis H<sub>a</sub> (Per Capita GDP) be rejected. This clearly suggests that Per Capita GDP does not significantly influence Happiness Index.

(3) Table – 2 shows Results of F Test are placed at Table-2. Here F = 6.074 and its significance level is 0.001 with df (2, 46). Thus all regression coefficients will be non zero.

(4) The VIF (Variance Inflation Factor) statistics are placed in Table-1. The VIF statistics for GDP and Per Capita GDP are less than 10. Hence there is no cause of concern from view point of multi co linearity amongst the independent variables.

(5) The test outputs elaborated at points (3) and (4) above provide considerable reliability to the results.

The emerging Multiple Regression Equation is as under:

$$\text{Happiness Index} = + 7.052 - 0.333 (\text{GDP}) + 0.187 (\text{Per Capita GDP})$$

(6) The co-efficient of determination as signaled by adjusted R<sup>2</sup> given in Table-1, is 0.175. This suggests that this model can explain 17.5 % variations in Happiness Index. Some other variables are responsible for the unexplained variations.

(7) Descriptive Statistics placed in Table -4 suggests that predictive utility of the model will be higher if the their data pattern is similar to the data set of western european countries.

## 7. FINDINGS

This research has revealed that GDP has negative association with Happiness Index with high value standardized regression coefficient standing at - 0.333. Its significance level is also 0.034 making it very relevant. All these lead us to believe that GDP is an important variable affecting Happiness Index. However at the same time Per Capita GDP though has positive association with Happiness Index, its low power regression coefficient + 0.187 coupled with non acceptable level of significance 0.224 do not permit it to be an important variable affecting Happiness Index. Population size may not have significant role in terms of affecting Happiness Index.

## 8. FUTURE RESEARCH DIRECTION

This research has examined only west european countries only. A wider study including more countries and more variables may be taken up. A comprehensive study of all the countries may as well give some more inputs.

Table No: 1

Regression Co-efficients , Significance Level & VIF Western Europe

	Standardised Regression Co-efficients( Beta)		Significance Level	Collinearity Statistics VIF
	Direction	Value		
Constant		7.052	<.001	
GDP (M.\$)	+	-0.333	0.034	1.346
Per Capita GDP(\$)	+	+0.187	0.224	1.346

Independent variables= GDP, Per Capita GDP

Dependent variable= Happiness Index N= 49 Adjusted R square= 0.175

Table - 2

ANNOVA Western Europe

Model	Sum of Square	df	Mean square	F	Significance
Regression	1.028	2	.514	6.074	0.001
Residual	3.892	46	.085		
Total	4.920	48			

Table – 3

Descriptive Statistics –WesternEurope

Parameters	Mean	Standard Deviation
Happiness Index	7.08671	0.320149
GDP (M.\$)	1269889.39	1265402.978
Per Capita GDP (\$)	60654.02	25757.990

## CONFLICT OF INTERESTS

None.

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