Does Economic Growth Ensure Life Satisfaction? : A Study Of Emerging Economies

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ABSTRACT

The BRIC Countries, with their recent developments, are expected to soon take over the G-6 set of economies by 2016. The developments experienced by BRIC economies are in the form of trade, investment and development, and are due to the huge population and economic foundations of these economies. Due to the strong economic growth of the BRIC countries, the consumers are able to spend more, thus emerging to be a major reason of consumer growth. The economic growth and developments taking place in the developing nations has a major effect on the level of satisfaction of the people in these economies. This paper analyses the effects of macroeconomic variables - namely Inflation, Unemployment, Gross Domestic Product (GDP), Foreign Direct Investment (FDI) and Prime Lending rate on the life satisfaction of people in the emerging economies - namely Brazil, China, India and the Russian Federation (BRIC).

Keywords: Life Satisfaction, Macro Economic Variables,Life Satisfaction Index (LSI), BRIC Nations, Human Development Index
JEL Classification: N10

INTRODUCTION

Jim O'Neil of Goldman Sachs coined the term BRIC in the year 2001 in a paper titled "The World Needs Better Economic BRICs". Brazil, Russia, India and China range high on the list of the major emerging economies of the World. The BRIC Countries today refers to the opportunities and cooperation in these countries in terms of trade, investment and development. The four BRIC Countries together comprise of more than 2.8 billion people or 41.8% of the World's population, accounting for more than 25% of the global GDP. The annual real GDP growth figures for the BRIC Countries between the years 2002 to 2007 further substantiate the same. The figure for China was 10.4%, India saw annual real GDP growth of about 7.9%, Russia 6.9% and that of Brazil was 3.7%. These factors clubbed with other reasons like strong economic foundations, and large population size have turned BRIC Countries into such promising future markets of trade.

With the pace of development experienced by these countries, they are expected to outgrow the G-6 by the year 2041. Other than this, the BRIC Countries have huge foreign exchange reserves. China has to the extent of US$ 1528 billion, Russia US$ 464 billion, India has US$ 266 billion and Brazil has US$ 179 billion. The economic growth and demographics have contributed in the development of the large emerging middle class. The consumption patterns of this class helps in both - the development and expansion of the global economy. A report by Goldman Sachs has analyzed the emergence of the middle class population and has concluded that the middle class population of the BRIC Countries is forecasted to more than double that of the developed G7 economies. The strengths of BRIC Countries include a strong consumer demand they have made up for themselves. This could be considered as a major reason for the growth. BRIC's consumers, as against the consumers in the developed nations of the world, spend more. The reason for the same is the strong economic growth experienced by the BRIC Countries since 2002.

Satisfaction with the state of the country is generally associated with the rising economic growth. The economically advanced nations are better placed with a modest level of economic growth, which in turn improves the level of satisfaction of the people. The level of satisfaction of the people in the economy can be analyzed from the spending habits displayed by individuals in those countries. Rising incomes lead to an improvement in the national conditions

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and further indicate an improvement in the life satisfaction of the people. The trends of the wealthy nations are more or less stagnant or negative when compared with that of the middle-income and poorer countries. Studying the emerging economies or the economies with a "middle-income class" of people is all the more significant since it is experiencing a good level of economic growth, largest increase in the level of personal well-being and satisfaction. In the emerging countries, the features of Globalized economies like international trade, presence of MNCs and free markets have led to soaring high growth rates. These economies are the ones which welcome global investment and trade, thereby embracing the key economic features. A rise in the income level of the people has further helped in increasing the conditions prevalent in the Nation. The rise in the disposable income of the population has also played an instrumental role in changing and influencing the spending habits and patterns of the individuals. In common parlance, a country's affluence is considered to be a predictor of the overall life satisfaction. It is considered generally that richer countries have more satisfied citizens. In the case of developing countries, a balanced economic growth has ensured an improvement in the indicators of human development, thereby reflecting the state of economic wellness of the country.

This study thus analyses the developments taking place in the developing countries, namely the BRIC countries, from the point of view of the improvement in the lifestyle of the people and the impact of economic indicators of a country namely - GDP, FDI, Inflation, unemployment and Prime Lending Rate on the same. For the purpose of the same, a Life Satisfaction Index has been computed for the BRIC countries, taking into concern variables like spends on white goods, rise in the disposable income of the people, increase in consumption expenditure, internet and mobile cellular subscriptions, research and development expenditures, expenditures on ICT and health expenses. The concept of the misery index, which is a combination of inflation and unemployment, was used to analyze the level of satisfaction of the people in the economies of Brazil, China, India and the Russian Federation.

LITERATURE REVIEW

The economic health of a country also helps in reflecting the level of satisfaction of the people in the country. The economic wellness of the country can be gauged from the performance of the macro-economic indicators of the economy. The macro-economic indicators like GDP, Inflation, Unemployment, Interest rates are reflective of the level of development witnessed by the economies. The satisfaction of the people is best understood by betterment in the standard of living of the public. Often, standard of living is confused by a mere rise in the incomes combined with happiness. However, luxuries cannot buy happiness. Satisfaction ,thus, is a more subjective variable in nature. Extensive literature review has been carried out to study the life satisfaction of the citizens of a country depending upon the inter-linkage of the same with macroeconomic performances of the concerned country.

❖ **General Well Being of People and LSI :** The general well-being of individuals and societies include a wide range of contexts ranging from wealth and employment to the environment, physical and mental health of the people, level of education, recreation, leisure time and social belongingness. On the global front, taking into consideration the parameters like the quality of life helps in understanding development in a much better manner, since it is much broader in nature in comparison to the standard of living. The quality of life of people in a Nation is directly related with the aspects of personal well-being of the people in a country. The Satisfaction with Life Index was created by Adrian G White at the University of Leicester as an attempt to show the subjective life satisfaction of people in different Nations. It encapsulates parameters like health, wealth, education and through that, measures the happiness of people and further evaluates happiness against the traditional measures of policy success, GDP and GNP.

❖ **Subjective Well-Being :** In the area of social sciences, empirical research on subjective well-being has been able to define individual happiness in a new way. These were initially related to psychology and sociology (Argyle, 1987; Michalos, 1991 and Myers, 1993). Recently, however, the concept has even been linked to economics. Easterlin (1974) made a notable contribution in the field of economics using happiness. In the opinion of Stutzer and Frey (2010), "subjective well-being" can be defined as a term used in psychology for measuring the extent to which an individual experiences happiness, and positive and negative events affect life satisfaction. The concept has been studied using traditional measures like incomes of individuals and GNP. Subjective well-being can be measured by studying its relationship with parameters like income, unemployment, inflation and inequality. Subjective well - being has been considered as a narrow approach, taking into account only some of the components of individual

welfare (Adler and Posner, 2006:77). Studies have also been conducted to examine the impact of unemployment on the subjective well-being of people. Joblessness has been defined as a single characteristic which affects well-being adversely. Its impact is found to be much more than even divorce and separation also. Higher unemployment is even observed to add to the crime rates. The harsher times of unemployment also call for a pressure on salaries. The depressed salaries further lead to lower levels of satisfaction amongst people, fear of redundancy, decreased leisure time and lesser alternative job opportunities (Frey and Stutzer, 2010).

❖ **Happiness and Income Levels In a Country :** A well acknowledged truth in happiness economics is that propounded by Easterlin (1974) commonly referred to as the "Easterlin Paradox". Easterlin on the one hand reported that higher incomes contribute towards the happiness of the people within a country, whereas on the other hand, the same conditions do not contribute towards happiness for certain other international comparisons. With a rise in incomes also, the happiness levels have seen a decline in the case of United States of America during 1960 to 1970. Happiness does not necessarily increase with an increase in the income. Thus, a better standard of living due to an increase in the income should not be considered as an indicator of happiness. Further, a study done by Hagerty and Veenhoven (2003) opined that no such paradox existed and countries actually get happier with an increase in income. Stevenson and Wolfers (2008) also concluded that rise in the levels of absolute incomes can be linked to the increased self-reported happiness levels of people. Clark (2008) reported a higher level of happiness for the richer people. Kahnemaan and Deaton (2010) and Diener et al. (2010) pointed in their studies that a higher level of income results in a more satisfied life.

❖ **Human Development :** The concept of human development is much more than the rise in national income and extends to the creation of an environment where people can develop their full potential and lead productive and creative lives according to their needs and interests. The concept of Human Development Index was originally devised by economist Mahbub-ul-Haq in 1990, and was further elaborated by Amartya Sen. Haq propounded the index as a measure of human development needed to convince the policy makers that development in the true sense extends from merely economic development to include aspects like improvement in human development also. It is defined as a composite index used to rank countries by the level of "human development" experienced by it as developing, developed and underdeveloped countries. It considers factors like life expectancy, education, per-capita GDP. Palgi and Shmotkin (2010) studied the satisfaction of life of the old people from the point of view of both their past and the present. The results indicated a direct relation of satisfaction with the level of intelligence of the people. It further indicated that as people grow, they become wiser and more knowledgeable since they understand more things in life.

❖ **Development State Of Emerging Economies :** Owing to the strong economic growth experienced by the emerging economies, the consumer markets are developing at a rapid pace. Due to an increase in the income level, the spending potential of the consumers has also witnessed a gradual shift. Traditionally, major share of the spending was on basic goods and necessities, whereas now, it has changed to education, recreation and leisure activities. By 2020, the consumers of emerging markets will indulge in discretionary spending due to an exponential rise in the middle-class income. This paper is an attempt to study the performance of macroeconomic indicators and considering their impact on the lifestyle of the people in emerging economies. This is considered with a view that the quality of life of people in an economy helps in determining the overall human development and satisfaction of people from their lives as a whole.

❖ **Economic Models To Measure Growth and Satisfaction :** The economic literature talks about modeling economic growth to a very great extent. Many models are available to quantify the economic growth. This paper uses Misery Index as a base model. It is referred to as an economic indicator created by Arthur Okun using the sum of the unemployment rate and the inflation rate. It is assumed that both the rates, if higher, contribute negatively, creating a worsening economic and social impact for a country. Robert Barro, a Chicago based economist gave the concept of the Barro Misery Index, which includes GDP and the bank rate.

The Misery Index has been used to study the efficiency of the presidential tenure in a political setup. A higher misery index indicates a less desirable condition from the point of view of the public, since it reflects both an increased inflationary state combined with an increase in the unemployment level also. Lovell and Tien (2000) studied the

impact of inflation and unemployment, better known as the Economic Discomfort Index on consumer sentiments. Further, they investigated the validity of the Discomfort Index as given by Okun and examined it as a measure of consumer sentiment by analyzing how well it explains the economic malaise. The Economic Discomfort Index uses the annual rate of inflation. Instead of this, if inflation is used for a quarterly or a monthly basis, the index would seem to be more dominated by the unemployment rate than the inflation rate. Another outcome as pointed out is that equal weights should not be assigned to both inflation and unemployment ; rather, a little more weightage should be allocated to inflation in place of unemployment.

Nordhaus (1975) investigated a model of public intertemporal choice consisting of decisions being made within the political framework and carrying out an investigation of policies being chosen in a stylized democratic condition. The macroeconomic framework within which the dynamic relation of unemployment and inflation is elaborated considers the level of unemployment and inflation in the economy. There exists a trade-off between both inflation and unemployment - unemployment and inflation share an inverse relationship: inflation rises as unemployment falls, and inflation falls as unemployment rises. It was also seen from the results that amidst the advanced countries, the countries showing the highest cyclical variability are the unplanned economies namely, US, Canada, Japan and West Germany, and the ones exhibiting minimum variation are the planned economies of France and Sweden.

OBJECTIVES OF THE STUDY

The macroeconomic indicators are tools employed to both understand the economic performance and predict the likely way in which the economy will move in the future. The indicators like GDP, Inflation, Interest rates reflect the state of the economy and are indicative of the level of development experienced by the country. This development of a country plays a crucial role in determining the extent of satisfaction felt by the public in general and are essential factors in the reduction of poverty and generation of resources for human development. This study tries to explore the impact of economic growth on the satisfaction level of the people in general, with the following objectives :

(i) To form a "Life Satisfaction Index" for four emerging economies - Brazil, Russia, India and China (BRIC) using economic data.

(ii) To establish a relationship, if any, between this "Life Satisfaction Index" and various indicators of economic growth like GDP, Inflation, Interest Rate, Foreign Direct Investment etc.

RESEARCH METHODOLOGY

❖ **The Approach :** The macro-economic indicators of a country namely - GDP, Inflation, Unemployment, Interest Rates and Foreign Direct Investment have an impact on the financial soundness of the economy. They reflect the overall performance of the country from a macroeconomic perspective, and are capable of reflecting, by and large, the health of the economy and the country as a whole. Enhanced performances of these indicators determine better economic conditions for the country and living conditions for the citizens. Furthermore, the economic status of the individuals of a country can be analyzed by their spending habits and lifestyle. The life satisfaction of people can be studied through the style of spending and the category of goods on which the majority of their income is spent. An improvement in the lifestyle of individuals can be studied from the spends on white goods, rise in the disposable income of the people, increase in consumption expenditure, the Internet and mobile cellular subscriptions, research and development expenditures, expenditures on ICT and health expenses. This study aims at analyzing the lifestyle development of the country from the point of view of the development experienced in the economic indicators for BRIC nations. To analyze the economic well-being and financial health of a country, the Life Satisfaction Index (LSI) of people of that country was created by taking into consideration the spending made by individuals in that country on lifestyle products and services. This is reflective of the financial soundness of the concerned country.

❖ **The Model** : A regression of the following form was considered for analyzing the Life Satisfaction of people :

$$LSI_{it} = \beta_1 + \alpha_u u_{it} + \alpha_p p_{it} + \alpha_g g_{it} + \alpha_r r_{it} + \alpha_r f_{it} + \varepsilon_{kit}$$

Where,

LSI_{it} = Life Satisfaction Index of the country *i* during year *t* ;

u = unemployment ;

p = inflation rate ;
g = growth rate ;
r = prime lending rate and ;
f = foreign direct investment ;
α_u, $\alpha_{p,}$ $\alpha_{g,,}$ α_r and α_f are the associated coefficients and ε_{kit} is an error term.

❖ **The Data :** The Life Satisfaction Index (LSI) is computed by taking certain parameters into consideration which reflect the spending by people in a particular country. The various parameters considered for computing the Life Satisfaction Index (LSI) are Research and development expenditure (% of GDP); Health expenditure total (% of GDP) ; Household final consumption expenditure (annual % growth) ; Information and communication technology expenditure (current US$) ; Export value index (2000 = 100) ; Import value index (2000 = 100) ; Improved sanitation facilities (% of population with access) ; Improved water source (% of population with access) ; Income share held by the lowest 20% ; Internet users ; Road density (km of roads per 100 sq. km of land area) ; Vehicles (per km of road) ; Daily newspapers (per 1,000 people) ; Mobile cellular subscriptions (per 100 people) ; Passenger cars (per 1,000 people) ; Depth of hunger (kilocalories per person per day) ; and Fixed broadband Internet subscribers (per 100 people).

The data pertaining to the emerging economies namely Brazil, China, India and Russia were taken from the World Bank data source. Likewise, the data for macroeconomic indicators include GDP growth (annual %); Inflation; Consumer prices (annual %) ; Lending interest rate (%) ; Unemployment, total (% of total labor force) and Foreign direct investment, net inflows (BoP, current US$). Furthermore, this type of data reflects uniformity and is comparable in nature. The period of the study is from 1999 to 2009.

The data, being time series data, was first tested for the presence of autocorrelation, heteroscedasticity and multicollinearity, and then regression was applied on the data. The results were evaluated at 95% level of significance. To determine whether the time series is heteroscedastic or not, the Breusch-Pagan-Godfrey test was applied by calculating the Θ value. The presence of autocorrelation in the data was checked by calculating the Durbin-Watson "d" statistic. All the results were below the critical values, indicating no presence of autocorrelation. The data was also analyzed for the presence of multicollinearity by using the indicators like Variance Inflation Factor and Tolerance Value. The R^2 value and beta coefficients of regression analysis were also examined.

FINDINGS AND DISCUSSION

The findings of regression of 'LSI' on macroeconomic variables - Inflation, Prime Lending Rate, Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) are discussed separately for the four countries. The results indicate different effects for different countries.

❖ **Findings Of The Regression Analysis For India :** The data taken for the study is GDP growth (annual %), Inflation, Consumer prices (annual %), Lending interest rate (%), Foreign Direct Investment, Net inflows (% of GDP) and Unemployment, total (% of total labor force). The edited data file had been prepared by intrapolating the data of unemployment. The results for India are mentioned in the Table 1. The data was first tested for the presence of autocorrelation using the Durbin-Watson d statistic, heteroscedasticity using the Θ Value, and multicollinearity using the values of tolerance and the variance inflation factor values. The d value of 2.831 indicates no presence of autocorrelation in the data. Likewise, to test heteroscedasticity, the Θ Value of 3.388 indicates no presence of heteroscedasticity, since the result is lower than the critical values at 5% and 1% , which are 12.5916 and 16.8119 respectively.

$$\mathbf{LSI}_{it}\ \boldsymbol{Cap} = -29824.286 + 1645.715u_{it} + 2298.707p_{it} - 1741.117g_{it} - 777.451\ \alpha_r r_{it} + 9008.586f_{it}$$

se =	(18259.504)	(502.227)	(1303.654)	(689.310)	(1292.275)	(1783.668)
t =	(-1.633)	(3.277)	(1.763)	(-2.526)	(-.602)	(5.051)

$$\mathbf{r^2 = .940}$$

The values for Inflation, Foreign Direct Investment and Gross Domestic Product are significant at 95% confidence level. Furthermore, the regression coefficients of Inflation and Unemployment exhibit a negative relation with respect to the life satisfaction of people. The growth story of India reflects a balanced system of developments as far as

Table 1: Results of The Regression Analysis for India					
Independent Variables	**Significance Value (95% confidence Level)**	**t Values**	**Regression coefficients - Unstandardized**	**TOL Value**	**VIF Value**
Inflation Rate	0.053	-2.526	-1741.117	0.27	3.708
Prime Lending Rate	0.138	1.763	2298.707	0.579	1.727
Rate of Unemployment	0.574	-0.602	-777.451	0.71	1.408
Foreign Direct Investment	0.004	5.051	9008.586	0.24	4.161
Gross Domestic Product	0.022	3.277	1645.715	0.628	1.592
R = .97					
R Square = .94					
Durbin Watson Statistic (5%) = 2.831					
Θ Value to test Heteroscedasticity = 3.388					
Sig F Change = .004					
Source of the Data: World Bank					

the savings and investments front is concerned. Though poverty and economic inequalities still exist, the Global level developments can certainly not be ignored. The increase in the English speaking populace combined with the unmatched intellectual capital of the country has certainly done a great deal in positioning it amongst the most preferred destination for outsourcing services and information technology and attracting FDI.

The economic development of the country, measured by the rate of growth and inflation, affect the level of satisfaction of the people. Unemployment is also one of the major factors capable of driving the satisfaction of people in the negative direction, since most of the people in India belong to the lower or middle class, to whom money matters a lot. Likewise, an increase in inflation also affects the satisfaction level of the people negatively.

❖ **Findings Of The Regression Analysis For Brazil :** The data taken for the study is GDP growth (annual %), Inflation, Consumer prices (annual %), Lending interest rate (%), Foreign Direct Investment, Net inflows (% of GDP) and Unemployment, total (% of total labor force). The edited data file was prepared by intrapolating the data of unemployment.

The data was first tested for the presence of autocorrelation using the Durbin-Watson d statistic, heteroscedasticity using the Θ Value and multicollinearity by using the values of tolerance and the variance inflation factor values. The d value of 2.195 indicates no presence of autocorrelation in the data. Likewise, to test heteroscedaticity, the Θ Value of 3.469 indicates no presence of heteroscedasticity, since the result is lower than the values at 5% and 1% significance, which are 12.5916 and 16.8119 respectively. The results are presented in the Table 2.

$$\mathbf{LSI}_{it}\ Cap = 36524.015 - 2498.5\ u_{it} - 283.188\ p_{it} + 624.841 g_{it} - 68.789 r_{it} - 1220.304 f_{it}$$

se =	(22679.302)	(2628.149)	(428.102)	(597.486)	(162.031)	(1097.579)
t =	(1.610)	(-.951)	(-.661)	(1.046)	(-.425)	(-1.112)

$$\mathbf{r^2 = .739}$$

None of the values are significant at the 95% confidence level. Furthermore, Inflation rate, Unemployment rate, Prime Lending rate and Foreign Direct Investment exhibit a negative effect on the life satisfaction index of the people, thereby indicating that a decrease in life satisfaction index of the people of Brazil could be due to the rise in Inflation, rise in the Prime Lending rate, increased Unemployment and increase in the FDI. Furthermore, the gross domestic product is positively impacting the life satisfaction of the people. During the Presidential term served by Henrique Cordoso in 1995 and 2003, inflation and its root causes were attacked with the use of "The Plano Real" economic theory aimed at cutting down government spending. Initially, the practice faced a lot of opposition, but later combined with a long-term growth objective, the same policy proved to be very beneficial. The period between the late 1980s and early 1990s was marked by a state of shocking upward movement in the prices of most of the goods, which turned winners into losers and vice-versa. However, the so-called unfortunate poor people of Brazil acquired money for the first time with stability in inflation in 1995. The unemployment state in Brazil has seen stability after the year 2000.

Table 2: Results of The Regression Analysis for Brazil					
Independent Variables	**Significance Value (95% confidence Level)**	**t Values**	**Regression coefficients - Unstandardized**	**TOL Value**	**VIF Value**
Inflation Rate	0.538	-0.661	-283.188	0.644	1.552
Prime Lending Rate	0.689	-0.425	-68.789	0.355	2.817
Rate of Unemployment	0.385	-0.951	-2498.5	0.58	1.724
Foreign Direct Investment	0.317	-1.112	-1220.304	0.564	1.773
Gross Domestic Product	0.344	1.046	624.841	0.624	1.602
R = .860					
R Square = .739					
Durbin Watson Statistic (5%) = 2.195					
Θ Value to test Heteroscedasticity = 3.469					
Sig F Change = .139					
Source of the Data: World Bank					

The high population level is the major cause of unemployment in Brazil. It is a market-based economy, largest in South America, but faces the problem of high unemployment and the most unequal distribution of wealth in the World.

❖ **Findings Of The Regression Analysis For China :** The data taken for the study is GDP growth (annual %), Inflation, Consumer prices (annual %), Lending interest rate (%), Foreign direct investment, Net inflows (% of GDP) and Unemployment, total (% of total labor force). Furthermore, the regression equation has been modified from its original form to the modified one presented below due to the presence of autocorrelation.

$$\mathbf{LSI}_{it} / \hat{Y} = \beta 1 / \hat{Y} + \alpha_u u_{it} / \hat{Y} + \alpha_p p_{it} / \hat{Y} + \alpha_g g_{it} / \hat{Y} + \alpha_r r_{it} / \hat{Y} + \alpha_r f_{it} / \hat{Y} + \varepsilon_{kit} / \hat{Y}$$

where,

$$\hat{Y} = Y - u_i$$

The data is first tested for the presence of autocorrelation using the Durbin-Watson d statistic, heteroscedasticity using the Θ Value and multicollinearity using the values of tolerance and the variance inflation factor values. The d value of 2.981 indicates no presence of autocorrelation in the data. Likewise, to test heteroscedasticity, the Θ Value of 7.9775 indicates no presence of heteroscedasticity, since the result is lower than the values at 5% and 1% significance

Table 3: Results of The Regression Analysis For China					
Independent Variables	**Significance Value (95% confidence Level)**	**t Values**	**Regression coefficients - Standardized**	**TOL Value**	**VIF Value**
Inflation Rate	0.001	6.722	0.708	0.127	7.869
Prime Lending Rate	0.117	1.893	0.236	0.003	352.618
Rate of Unemployment	0.108	-1.958	-0.394	0.003	395.775
Foreign Direct Investment	0.064	2.373	0.891	0.006	165.135
Gross Domestic Product	0.001	6.352	0.703	0.003	365.789
R = 1.00					
R Square = 1.00					
Durbin Watson Statistic (5%) = 2.981					
Θ Value to test Heteroscedasticity = 3.1815					
Sig F Change = .000					
Source of the Data: World Bank					

level, which are 12.5916 and 16.8119 respectively. The results for China are presented in the Table 3.

$$LSI_{it}\ Cap = .904 - .394u_{it} + .708p_{it} + .703g_{it} + .236r_{it} + .891f_{it}$$

se = (.190) (.201) (.105) (.111) (.124) (.375)

t = (4.759) (-1.958) (6.722) (6.352) (1.893) (2.373)

$r^2 = 1.000$

The values for Prime Lending Rate and Rate of Unemployment are significant at the 95% level of significance. Also, Inflation rate, Prime lending rate, Unemployment and Foreign Direct Investment had a positive impact on the life satisfaction index of the people; whereas, gross domestic product had a negative impact on the life satisfaction index of the people.

China's economic growth has been considered by many as remarkable, capable of overcoming the American economy by 2035, attributed to the strong growth rate of the country. The country has achieved miraculous growth in the last 30 years, and the same can be attributed to the increasingly competitive market-place and economic restructuring planned by the government. The economic reforms made in China during the 1970s and 1980s opened it to trade and foreign investments by other countries. It is considered as a safe haven for investors. Modernization of the economy and opening up of the market has brought wealth to the nation in the form of FDI, which has proved to be a major driver of growth for the country. These two indicators of the good economic health of China have played a tremendous role in influencing the level of satisfaction of the citizens. Gradually, a new educated, technologically competent and extravagant class of people is emerging. As per the results, however, the GDP in case of China was considered to exhibit a negative relationship with the life satisfaction of the people.

❖ **Findings Of The Regression Analysis For The Russian Federation :** The data taken for the study is GDP growth (annual %), Inflation, Consumer prices (annual %), Lending interest rate (%), Foreign Direct Investment, net inflows (% of GDP) and Unemployment, total (% of total labor force). Furthermore, the regression equation has been modified from its original form to the modified one presented below due to the presence of autocorrelation.

$$Log\ (LSI_{it}) = Log\ (\beta 1) + Log\ (\alpha_u u_i) + Log\ (\alpha_p p_{it}) + Log\ (\alpha_g g_{it}) + Log\ (\alpha_r r_{it}) + Log\ (\alpha_r f_{it}) + Log\ (\varepsilon_{kit})$$

The data is first tested for the presence of autocorrelation using the Durbin-Watson d statistic, heteroscedasticity using the Θ value, and multicollinearity using the values of tolerance and the variance inflation factor values. The d value of 2.000 indicates no presence of autocorrelation in the data. Likewise, to test heteroscedasticity, the Θ Value of 3.076 indicates no presence of heteroscedasticity, since the result is lower that the values at 5% and 1% significance level, which are 12.5916 and 16.8119 respectively. The results for the Russian Federation are presented in the Table 4.

$$LSI_{it}\ Cap = 6.423 - 2.114u_{it} + .397p_{it} - .147g_{it} - 1.194r_{it} + 1.679f_{it}$$

se = (1.015) (1.843) (.740) (.875) (1.317) (.364)

Table 4: Results of The Regression Analysis for The Russian Federation

Independent Variables	Significance Value (95% confidence Level)	t Values	Regression coefficients - Unstandardized	TOL Value	VIF Value
Inflation Rate	0.615	.536	.397	0.089	11.214
Prime Lending Rate	0.406	-.907	-1.194	0.062	16.071
Rate of Unemployment	0.303	-1.147	-2.114	0.115	8.703
Foreign Direct Investment	0.006	4.610	1.679	0.445	2.245
Gross Domestic Product	0.873	-.168	-.147	0.591	1.691
R = .979					
R Square = .959					
Durbin Watson Statistic (5%) = 2.000					
Θ Value to test Heteroscedasticity = 3.076					
Sig F Change = .002					
Source of the Data: World Bank					

t = (6.326) (-.907) (-1.147) (.536) (-.168) (4.610)

r^2 = .959

The results indicate significant value for only Foreign Direct Investment. Also, the Prime Lending rate, Rate of Unemployment and Gross Domestic Product indicate a negative relation with the life satisfaction index of the people ; whereas, a positive relationship is observed for Inflation rate and Foreign Direct Investment on the life satisfaction index of the people.

The fall of the Soviet empire transformed Russia into a market-based and globally knit economy. The privatization in the 1990s pertaining to the defense and energy sectors have made the economy more reliant on exports, which have further rendered it more vulnerable to global happenings. Though on the other hand, it has even been able to attract more FDI.

The results of the study indicate life satisfaction to be positively related with FDI and Inflation. Russia's GDP and PLR were also not positively correlated with the LSI. Unemployment affects the stability adversely. Inflation indicates a positive correlation with the LSI.

CONCLUSION

For the purpose of the study, the Life Satisfaction Index is constituted using parameters like Research and development expenditure (% of GDP); Health expenditure, total (% of GDP); Household final consumption expenditure (annual % growth) ; Information and communication technology expenditure (current US$) ; Export value index (2000 = 100) ; Import value index (2000 = 100); Improved sanitation facilities (% of population with access) ; Improved water source (% of population with access) ; Income share held by the lowest 20% ; Internet users ; Road density (km of roads per 100 sq. km of land area) ; Vehicles (per km of road) ; Daily newspapers (per 1,000 people) ; mobile cellular subscriptions (per 100 people) ; Passenger cars (per 1,000 people) ; Depth of hunger (kilocalories per person per day) and Fixed broadband Internet subscribers (per 100 people). The index was then regressed upon the independent variables to obtain the results.

In all the cases, the results reveal Unemployment being negatively associated with Life Satisfaction. The results also point out that Unemployment affects Life Satisfaction more strongly than any other macroeconomic variable. In most of the cases, Inflation also shows a negative correlation with LSI. The interpretation of result reveals a merging effect of the Misery Index traditionally spelt out and the Barro Misery Index. Employment dimension is considered to be an important indicator of gauging macroeconomic performance. Prime Lending rate and FDI have also been considered as important indicators in studying the Life satisfaction of the people. Therefore, the traditional concept of the Misery Index as a sum of inflation and unemployment is insufficient in the present times, since it is incapable of capturing other relevant dimensions.

LIMITATIONS OF THE STUDY

The present study has limitations in the form of non-uniformity in the data. The data was collected from the reliable sources such as the World Bank Database and the researchers trusted the authenticity of the same. In case there were some reporting errors in the data, it might also appear in the results, though the possibility of error was very less.

SCOPE FOR FUTURE RESEARCH

Although the researchers have tried to incorporate all the available parameters in the present study, but since the scope of this study is very wide, therefore, the trade-off between parsimony and description was difficult to achieve. The concepts of Life Satisfaction Index can be further enhanced by adding more variables to construct the same. Also, the model of Life Satisfaction Index can be applied to other countries as well.

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