Vol 7 Issue 2 Nov 2017

ISSN No : 2249-894X

Monthly Multidisciplinary Research Journal

Review Of Research Journal

Welcome to Review Of Research

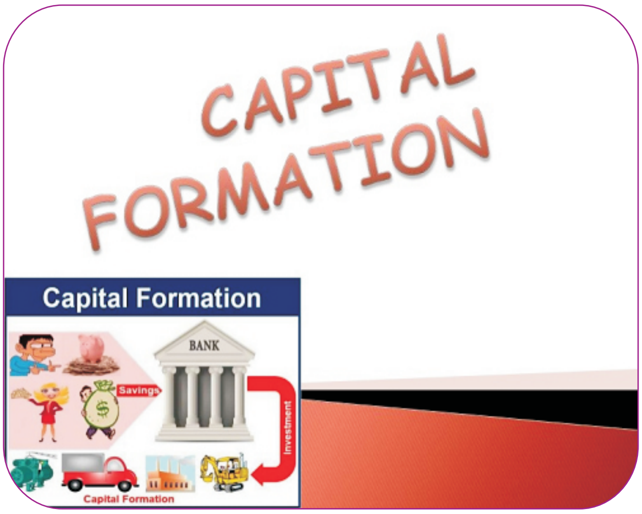
RNI MAHMUL/2011/38595 **ISSN No.2249-894X**

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.oldror.lbp.world

REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.2331(UIF)
VOLUME - 7 | ISSUE - 2 | NOVEMBER - 2017

AN ANALYSIS OF RELATIONSHIP BETWEEN CAPITAL FORMATION AND ECONOMIC GROWTH IN INDIA



Gorkhnath Tanaji Uttekar
Assistant Professor, Department of Business Economics , SVKM's Mithibai College, Vile Parle (W), Mumbai.

ABSTRACT: -

Capital formation is an important macroeconomic variable in any economy. The stock of capital and the rate of capital accumulation play an important role in economic development of a country. In this paper capital formation and economic growth are considered for analysis over the period of 1990-91 to 2015-16. A statistical model was developed on economic data to investigate the relationship between capital formation and economic growth in India.

KEY NOTES: *Capital formation, economic growth, stock of capital.*

I.INTRODUCTION

In a country's economic development, the role of economic factors is decisive. The stock of capital and the rate of capital accumulation play an important role in economic development of a country. With the development of growth economics, the role of capital formation has been emphasized. Harrod –Domar model of economic growth has treated capital as the crucial factor in economic growth. A country which wants to accelerate the pace of growth has to save more, which will lead to an investment. It has been also argued that a country cannot hope to achieve economic progress unless and until a minimum rate of capital accumulation is maintained.

The process of capital formation involves three distinct interdependent activities. The first thing that is required for capital formation is saving. The savings are to be mobilized for productive purposes. Thus in the process of capital formation, the second activity is finance. The third is investment itself. It is the activity that raises the productive capacity of the country.

II. REVIEW OF LITERATURE

This section reviews the empirical studies on the relation between capital formation and economic growth in India. This will add to make the present study a more meaningful and fruitful. Some of these studies are as stated below-

Mahambare and Balasubramanyam (2000) in their paper carried out analysis about liberalization and savings in developing countries with reference to India. They employed vector autoregressive (VAR) model using the techniques of co-integration and error correction mechanism (ECM) with the time series data for the years 1960-61 to 1996-97. Their results suggest that financial savings exhibit a long run positive association with the level of GDP per capita.

Ray (2007) carried out the study on capital formation in the Indian Economy over a period of 34 years between 1970 and 2004. Three measures of capital formation viz. Gross Fixed Capital Formation, Gross Domestic Capital Formation and Net Domestic Capital Formation were used for the study. Results of the study revealed that there is no statistically significant impact of liberalization on any measure of capital formation.

Mehta Rekha (2011) in her paper, "Short run and long run relationship between capital formation and Economic growth in India" was empirically tested with the help of co- integration technique and vector error correction technique. The study covered a long time-period from 1950-51 to 2009-10 in which annual time series data were used in the analysis. The study reveals a long-run relationship between capital formation and economic growth in India.

III. OBJECTIVES OF THE STUDY

The present paper is an attempt to study the relationship between capital formation and economic growth in India. The main objectives of this study are –

• Review of existing literature on the study of relationship between capital formation and economic growth.
• To find out relationship between capital formation and economic growth.
• To bring forth conclusions and policy implications of the present paper.

IV. RESEARCH METHODOLOGY

Time series data on capital formation and economic growth covering the time period from 1990-1991 to 2015-16 have been used for analysis in this paper. The data for the present study have been taken from Economic Survey, Ministry of Finance, Government of India. The data on capital formation have been taken in terms of Gross Domestic Capital Formation (GDCF) at current prices and data on economic growth have been taken in terms of Gross Domestic Product (GDP) at current market prices.

To estimate whether the relation between Capital formation and GDP is positive or not, we have used correlation analysis. And to analyze its impact, we have used regression model. For this we have develop a growth model which takes the form as:

$$GDP = f\,(GDCF) \;............\; (1)$$

Where,
GDP represents growth of GDP in India, which is a dependent variable.
GDCF is the Gross Domestic Capital Formation in India, which is explanatory variable.

Hypothesis Formulation

In this paper, we have to find whether the capital formation has significant effect on our GDP. For this we set up a statistical hypothesis as:

H_o: There is no significant relationship between Gross Domestic Capital Formation and growth of GDP.
H_1: There is a significant relationship between Gross Domestic Capital Formation and growth of GDP.

V. DATA ANALYSIS AND INTERPRETATION

The examination corresponding to the present objective is completed by first analyzing the trend of relationship between Gross Domestic Capital Formation and GDP in India.

Table 1: Trends in GDCF and GDP in India from 1990-91 to 2015-16

Year	Gross National Income (Rs. Crores)	Year on Year Growth rate of Gross National Income	GFCF (Rs Crores)	Year on Year Growth rate of GFCF	GFCF as % of GDP
1990-91	578667	----	139663	----	24.14
1991-92	663798	14.71	152466	9.17	22.97
1992-93	762900	14.93	177929	16.70	23.32
1993-94	879275	15.25	191456	7.60	21.77
1994-95	1032507	17.43	228442	19.32	22.12
1995-96	1213241	17.50	295046	29.16	24.32
1996-97	1406195	15.90	328046	11.18	23.33
1997-98	1559189	10.88	372401	13.52	23.88
1998-99	1788410	14.70	427069	14.68	23.88
1999-2000	2007699	12.26	484666	13.49	24.14
2000-01	2154680	7.32	495196	2.17	22.98
2001-02	2335777	8.40	590240	19.19	25.27
2002-03	2519637	7.87	601120	1.84	23.86
2003-04	2820795	11.95	697478	16.03	24.73
2004-05	3219835	14.15	931028	33.48	28.92
2005-06	3667253	13.90	1120292	20.33	30.55
2006-07	4261472	16.20	1343774	19.95	31.53
2007-08	4966578	16.55	1641673	22.17	33.05
2008-09	5597140	12.70	1821099	10.93	32.54
2009-10	6439827	15.06	2055772	12.89	31.92
2010-11	7702308	19.60	2407069	17.09	31.25
2011-12	8659505	12.43	2997733	24.54	34.62
2012-13	9827250	13.49	3324973	10.92	33.83
2013-14	11093638	12.89	3515621	5.73	31.69
2014-15	12297698	10.85	3783837	7.63	30.77
2015-16	13522256	9.96	4002781	5.79	29.60
CAGR	**0.123802**		**0.132331**		

Source: Economic Survey, 2016-17, Statistical Appendix,

CORRELATION ANALYSIS:

We used the technique of correlation to test the statistical significance of the association between Gross Domestic Capital Formation and growth of GDP.

Correlation helps to measure the strength and direction of a linear association between two variables.

The estimated result of Correlation Analysis tells us the association between Gross Domestic Capital Formation and growth of GDP is 0.9931 which is positive and significant at 0.01% level of significant. And it is shown in Table 2.

Table 2: Correlation Co-efficient Results

Correlation Coefficient GDP Vs GDCF	t value	p value
0.9931*	1.75	0.09160722

*significant 1% level (two-tailed)

REGRESSION ANALYSIS

Regression analysis is one of the most commonly used statistical techniques used in almost all fields. Its main objective is to explore the relationship between a dependent variable and one or more independent variables (which are also called predictor or explanatory variables).

In our case, the link between Economic Growth (measured in terms of GDP) and between Gross Domestic Capital Formation in India described by using Linear Regression Model

$$GDP = \alpha + \beta\ (GDCF) + e........\ (2)$$

Where,
GDCF is the Gross Domestic Capital Formation in India, which is explanatory variable.
GDP Gross Domestic Product which is the dependent variable.
"β" Regression Coefficient (to be estimated)
"a" Intercepts the Y-axis.

Table-3: Gross Domestic Capital Formation and growth of GDP.

Equation	α	β	*R*	R^2	Adjusted R^2	Std. Error of the Estimate	F
GDP= $\alpha + \beta$ GDCF + ε	253556.93 *** (1.754436)	3.167134416 *** (42.59613072)	0.993181	0.986408	0.9858651	514264.89	1814.4303

Figures in the parantheses are 't' values.
***indicates significant at 1 % level.

Table indicates the estimated relationship between Gross Domestic Capital Formation and growth of GDP in India. The F value shows that the model is a good fit. The R2 value 0.98 indicates that 98 per cent of the changes that occur in GDP are accounted by Gross Domestic Capital Formation. The β value is also significant. This shows that one percentage change in GDCF causes 3.16 percentage changes in GDP.

VI. CONCLUSION

Thus it can understand from the above analysis that there exists a strong relationship between economic growth and capital formation in India. But it has been also pointed out that the investment rate in India has not risen at the desired rate. The efforts should be made from different sectors of the economy such as household sector, private corporate sector as well as the public sector. From policy point of view it is suggested that more thrust may be given for boosting the capital formation in the economy in order to achieve high economic growth in Indian economy.

REFERENCES

Mahambre, V. and Balasubramanyam, V.M. (2000): "Liberalization and Savings in Developing Countries: The Case of India", Working Paper No. 2000/004, Lancaster University Management School, Lancaster, UK.
Mehta Rekha (2011): "Short run and long run relationship between capital formation and Economic growth in India", IJMT, Volume 19, Number 2, July - December 2011.
Ray, Achintya (2007): "A Time Series Analysis of Long Term Capital Formation in India" Vidyasagar University Journal of Commerce 12: 21-31.
V. K. Puri and S.K. Misra (2016): "Indian Economy", Himalaya Publishing House, New Delhi.

Gorkhnath Tanaji Uttekar
Assistant Professor, Department of Business Economics , SVKM's Mithibai College, Vile Parle (W), Mumbai.