



Relationship between Economy and Financial Market

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Abstract : Indian economy has grown average 6.18%^[2] over last two decades (see Annexure 3). For the same period, capital markets are giving average 14.2%^[1] CAGR, which is double the rate of growth. This phenomenon is unique in the world. Digital economy is substantiated because of Jandhan, Aadhar and Mobile trinity, more people are investing in equity markets. Ease of business due to fiscal transfers and other government expenditure is observed. Considering aforesaid points, this paper suggests a positive correlation between financial market dynamics, economic growth, and currency strength.¹

IndexTerms – Markets, Economy, Government Expenditure, Fiscal Distributions, GDP

INTRODUCTION

Indian economy has experienced a foray of political changes from socialism to now, capitalism. For the understanding of economy for this paper, changes defining years are lensed as under^[7]:

Years	State of economy	Government's work	Result
'50s to '80s	Government run ecosystem. Majorly state controlled. Relative political stability at the end of the last decade.	Investments in education, broadened government jobs. Still operated in License Raj.	Laid groundwork for self-reliant economy for lively sustainance.
'80s to '00s	Initially limited openings to trade and later on in 90s, substantial openings were noticed. Political structural stability was seen.	LPG opened up the economy, emphasis on service sector increased, private sector boom happened.	Rise of lower-middle and middle class. Indians travel abroad for higher education access.
'00s and forward	India becomes a global force with enormous market. Continues to expand with stable governance.	Jandhan, Aadhar and Mobile trinity, New education policy, Make in India initiative.	FII's flows are at record highs. Tremendous manufacturing incentive is observed. More people have access to capital markets.

NEED OF THE STUDY

The following paper showcases the positively correlated dynamics between capital markets and fiscal policies. It analyses the historical (real) GDP data dating from 1960s^[1] to analyse the economic position. Further, share market changes on long term perspective is linked to fiscal decisions throughout the decades. This is important for understanding broad picture. Analysis and conclusions drawn are significant for understanding causes for positive trajectory and link between capital markets and government policies.

2.1 Objectives

Finding out how the government expenditure has linked to GDP growth rate throughout the last century. Such assessment shall result in growing government interest and capability to expand the economic footprint.

Share market capitalization is compared with GDP to get the picture of how the capital market growth is turning out to be. Above data in link with other fiscal decisions and analysis shall be helpful in concluding the relation of economic policies and capital markets.

2.2 Theoretical framework

All the bare sources are used in this paper for research and analysis. This includes World Bank, International Monetary Fund (IMF) resources and Reserve Bank of India. All the calculations are attached in annexures and necessary bibliography is listed.

RESEARCH METHODOLOGY

The methodology section outline the plan and method that how the study is conducted. This includes Universe of the study, sample of the study, Data and Sources of Data, study's variables and analytical framework. The details are as follows;

3.1 Population and Sample

This research adopts a mixed-methods approach to comprehensively address the multifaceted nature of the research questions. The research design combines elements of both qualitative (approach to categorize economy into blocks of years) and quantitative (numerical evidences) methodologies to provide a nuanced understanding of the dynamics.

3.2 Data and Sources of Data

The focus remained on GDP numbers, Government expenditure and the impact it has on capital market. Capital market comprises businesses, regulators and individuals.

Data is primarily collected through the publicly available data from RBI, World Bank and International Monetary Fund (IMF).

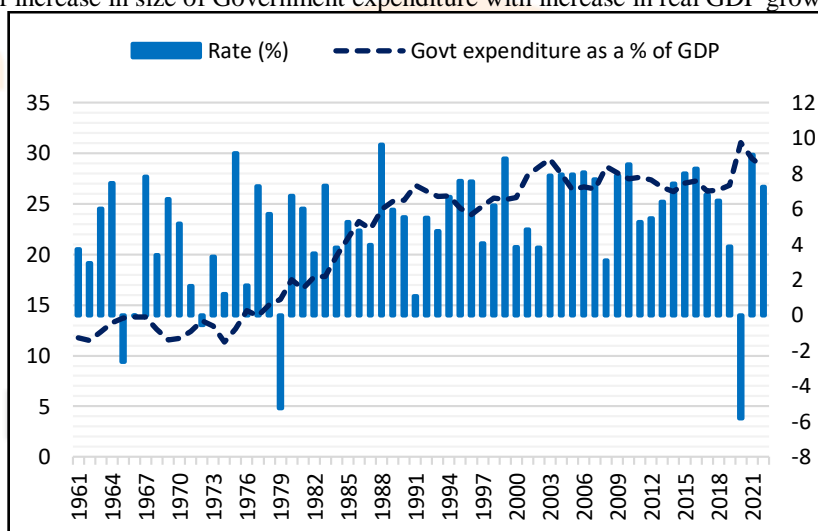
3.3 Theoretical framework

Ethical approval need not required as the data is publicly available on their websites. All such data is included in bibliography. The data analysis involves both descriptive statistics and other statistical techniques, such as linear trend, to uncover patterns and relationships. A detailed annexures outline mathematics used from data collection through analysis, ensuring a systematic and timely progression of the research. The comprehensive research methodology adopted aims to provide reliable and valid insights.

IV. RESULTS AND DISCUSSION

4.1 Findings

Figure 4.1: Comparison of increase in size of Government expenditure with increase in real GDP growth rate (See Annexure 1)

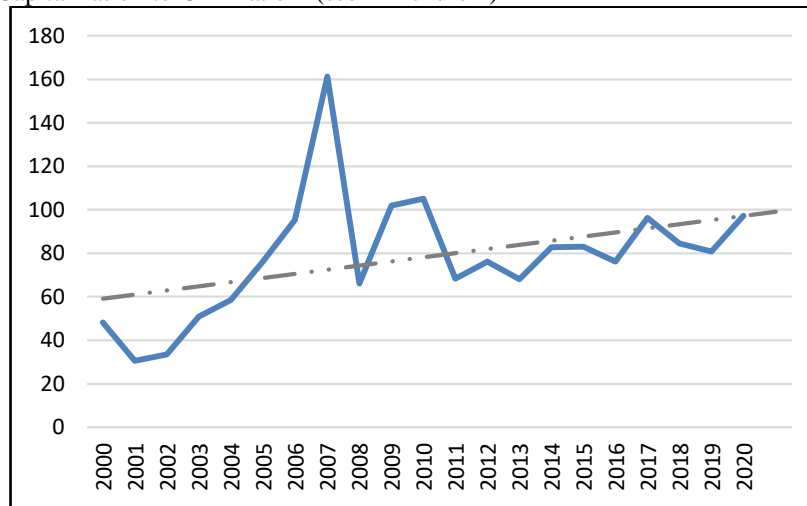


In order to uphold India's democratic structure and to expand the access to resources, the government has augmented government expenditure, as indicated in Figure 1. With growing tax collections, government is able to expand economic footprint by making access to resources available for those in need. When compared with GDP growth rate over the years, it can be said that Government spending shall have to be increased even further to avoid disparity.

This imperative arises from a recognition of the factors delineated in Figure 2, which highlight the potential consequences if left unaddressed. Firstly, profits are anticipated to concentrate among a select group of exceptionally efficient companies, posing a risk of economic disparity.

Secondly, wealth distribution is likely to skew towards well-educated and well-connected business individuals, further exacerbating social and economic inequalities.

Lastly, economic growth may disproportionately favor a handful of highly developed states, underscoring the need for strategic fiscal transfers to mitigate regional imbalances and sustain a more equitable democratic framework.

Figure 4.2: Stock Market Capitalization to GDP ratio^[3] (see Annexure 2)

Ratio = Value of Total of Stocks Traded / Aggregate Value of Output by Economy

Figure 2 showcases that a rising stock market capitalization to GDP ratio may suggest that stock prices are high relative to the country's economic fundamentals. It could imply that investors have high expectations for future corporate profits and economic growth.

However, an excessively high ratio might also be a signal of a potential stock market bubble, as it could indicate overvaluation and speculative behavior. But a working paper from RBI^[6] states that increased equity flows, bonds and FPI in fact reduced the market volatility. Hence this indicates that overvaluation of economy doesn't hold true.

Since it is observed that this ratio is approaching 1 (100%) meaning numerator being equal to denominator. i.e. to say, it is expected that infusion into capital market shall outperform the current economic value added.

4.2 Discussion

A. FPI and FDI Narrative

FDIs have injected approximately \$3 trillion into the Chinese stock market, generating a total return CAGR of 4.17% (see annexure 4) over the past decade.

In stark contrast, the net inflow (BoP) of FDI in India has attracted \$0.5 trillion, yielding a significantly higher total return CAGR of 14.3% over the same period, more than twice the return of the Chinese market.

This trend remains consistent when extended to a 20 or 30-year timeline, positioning India as the only major stock market worldwide, apart from the USA, that has consistently outperformed.

Given growing concerns surrounding the Chinese economy and geopolitical tensions, Western investors appear to increasingly redirecting their focus to India as a viable alternative for capital investment.

B. Historical Economic Narrative

From the introduction, it is brought to notice that average populus throughout 50s to 80s was focused on to getting a sustainable living by having a work. The question of capital markets doesn't arise in this bracket. However policies of building educational frontiers and government led companies laid foundational system for growing trades.

'80s to '00s was an era where services industries were boomed, evident by growth of IT sector in India. Private sector also boomed, leading to savings and access to capital markets. Organizations such as SEBI were formed due to initial inabilities to regulate such markets.

Banking industry legitimately outperformed itself in the 80s to 00s.^[9] In '96 ICICI bank enabled internet banking facilities, which led to substantial growth of private sector banking. Further, HDFC Bank had become banking giant by '00s. Changes in corporate lendings and exotic instruments issued by RBI over the years^[11] for banking channels increased the money flow. Evidently increasing access to capital markets and investments.

C. Quantitative Narrative

A growing stock market capitalization to GDP ratio often indicates elevated stock prices in relation to a nation's economic fundamentals, suggesting heightened investor expectations for future corporate profits and economic expansion.

However, an excessively high ratio could signal a potential stock market bubble, pointing to overvaluation and speculative behavior. Contrarily, a working paper from the Reserve Bank of India^[6] (RBI) argues that increased equity flows, bonds, and Foreign Portfolio Investments (FPI) have effectively diminished market volatility.

This suggests that the earlier concerns of overvaluation may not be entirely accurate, as the infusion of diverse financial instruments has contributed to market stability.

4.3 Conclusion

The Indian economy has averaged a 6.18%^[2] growth rate over the past two decades. Interestingly, capital markets have surpassed this, exhibiting an average CAGR of 14.3%. This unique phenomenon is influenced by factors like the digital economy driven by the JAM trinity and improved ease of business through fiscal transfers.

This paper proposes a positive correlation between financial market dynamics, economic growth, and currency strength in the Indian context.

Acknowledgment

1. Jan Dhan, Aadhar and Mobile has helped digital outreach in India. It is expected to drive per capita GDP increase from \$1700 today to \$4137 by 2027. Taken from UIDAI notes. (https://www.uidai.gov.in/images/news/JAM_Jan-Dhan-Aadhaar-mobile-penetration-driving-Indias-digitisation-FE.pdf)
2. ¹ As per income tax website, last year's tax collections net of refunds were grown by 17.33%, further the trend is visibly inclining. (<https://incometaxindia.gov.in/Lists/Press%20Releases/Attachments/1145/PressRelease-Direct-Tax-Collections-for-FY2023-24-up-to-10-08-2023.pdf>)
3. <https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2022&locations=CN&start=2011>
4. <https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2022&locations=IN&start=2012>
5. Also indicates reduction in volatility viewed with increase in foreign investment, supporting evidence for RBI working paper mentioned in bibliography, (https://niftyindices.com/docs/default-source/indices/nifty-50/nifty-50-at-20k.pdf?sfvrsn=54a79334_10)
6. Reduction in volatility is starkly visible, (https://niftyindices.com/docs/default-source/indices/nifty-50/nifty-50-at-20k.pdf?sfvrsn=54a79334_10)
7. https://niftyindices.com/docs/default-source/indices/nifty-50/nifty-50-at-20k.pdf?sfvrsn=54a79334_10

BIBLIOGRAPHY

- [1] National Stock Exchange Archives, 25 Years of Nifty 50, 2022-01
- [2] World Bank Metadata, Indicators, GDP
- [3] Databank of World Bank, Global Financial Development
- [4] International Monetary Fund (IMF), Data Mapper
- [5] International Monetary Fund (IMF), Public Finances in Modern History
- [6] Reserve Bank of India, Working Papers- Portfolio Flows and Exchange Rate Volatility
- [7] Wikipedia, History of India: 1947- Present, Includes work cited therein
- [8] Press Information Bureau (PIB), Note on Jandhan, Aadhar and Mobile
- [9] S. Ranhith, Growth of E-banking: Challenges and opportunities in India
- [10] World Bank, Metadata, Indicators
- [11] Reserve Bank of India- Collection of chronological changes

ANNEXURES

[1] Comparison of increase in size of Government expenditure with increase in real GDP growth rate

Year	Rate (%)	Govt expenditure as a % of GDP
1961	3.722743	11.78129959
1962	2.931128	11.47570038
1963	5.994353	12.32830048
1964	7.45295	13.24190044
1965	-2.63577	13.70919991
1966	-0.05533	13.81659985
1967	7.825963	13.80550003
1968	3.387929	12.59290028
1969	6.5397	11.52970028
1970	5.15723	11.72200012
1971	1.64293	12.37880039
1972	-0.5533	13.4684
1973	3.295521	12.91709995
1974	1.185336	11.33720016
1975	9.149912	12.67990017
1976	1.663104	14.44579983
1977	7.254765	13.94099998
1978	5.712532	15.01379967
1979	-5.23818	15.56000042
1980	6.735822	17.47979927
1981	6.006204	16.61829948
1982	3.475733	17.75460052

1983	7.288893	17.83390045
1984	3.820738	19.80500031
1985	5.254299	21.55699921
1986	4.776564	23.22809982
1987	3.965356	22.51980019
1988	9.627783	24.45734181
1989	5.947343	25.23399758
1990	5.533455	25.37149754
1991	1.056831	26.80147855
1992	5.482396	26.22926192
1993	4.750776	25.74205238
1994	6.658924	25.75625289
1995	7.574492	24.54938513
1996	7.549522	23.94404158
1997	4.049821	24.79637299
1998	6.184416	25.58571776
1999	8.845756	25.40422838
2000	3.840991	25.63605208
2001	4.823966	27.78837908
2002	3.803975	28.613299
2003	7.860381	29.42573808
2004	7.922937	27.95920009
2005	7.923431	26.43071772
2006	8.060733	26.6585538
2007	7.660815	26.46690464
2008	3.086698	28.69003936
2009	7.861889	28.05205601
2010	8.497585	27.44729154
2011	5.241315	27.64058169
2012	5.456389	27.36385502
2013	6.386106	26.5999481
2014	7.410228	26.22044208
2015	7.996254	27.05897449
2016	8.256305	27.23284354
2017	6.795383	26.23166259
2018	6.453851	26.32766503
2019	3.871437	26.84583755
2020	-5.83105	31.05705449
2021	9.050278	29.4745905
2022	7.239693	28.62186963

[2] Stock Market Capitalization to GDP Ratio

Series Name	Stock market capitalization to GDP (%)
2000	48.1748
2001	30.6467
2002	33.4381
2003	50.8467
2004	58.5976
2005	76.1523
2006	95.2151

2007	161.24
2008	66.0031
2009	101.895
2010	105.183
2011	68.2701
2012	76.0772
2013	68.1342
2014	82.7172
2015	82.9616
2016	76.0981
2017	96.3988
2018	84.4384
2019	80.7658
2020	97.2927

[3] Calculating average GDP growth rate

Year	Rate (%)
1999	8.845756
2000	3.840991
2001	4.823966
2002	3.803975
2003	7.860381
2004	7.922937
2005	7.923431
2006	8.060733
2007	7.660815
2008	3.086698
2009	7.861889
2010	8.497585
2011	5.241315
2012	5.456389
2013	6.386106
2014	7.410228
2015	7.996254
2016	8.256305
2017	6.795383
2018	6.453851
2019	3.871437
2020	-5.83105
2021	9.050278
2022	7.239693

[4] Calculating CAGR of Shanghai Stock Exchange Index

On 01/01/2014 index was at 2033. On 14/01/2024 index was at 2881.

Annualized returns = 4.17%

Calculation –

% Returns = $((FV/PV)-1)/N$

Where,

FV = Future Value

PV = Present Value

N = Number of years

$((2881/2033)-1)*100 / 10$ Years