European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

Corporate Investment and Economic Policy Uncertainty (EPU) Index Evidence from India

Dr Amit Hedau[1]
National Institute of Construction Management and Research, Hyderabad, India

Abstract
The author examined the relationship between the capital expenditure to total assets (CETA) ratio and the economic policy uncertainty (EPU) index, as well as a few firm-specific financial and two macroeconomic variables in the Indian context. Logistic Regression and quantile regression are used to evaluate secondary data from 50 listed companies on India's National Stock Exchange (NSE) from 2014 to 2023 (January to December). The author found that as uncertainty increases, the sample companies' investment in assets decreases and vice versa. The study's originality is the use of EPU index data in an Indian context, which has rarely been done in previous studies. The findings have consequences for the promoter in understanding the impact of uncertainty in investment decisions, as well as for the government in reducing uncertainty in order to create a more stable economic environment.
Keywords: Capital Expenditure, EPU, India, Regression.

1. Introduction

The most certain things in this world is uncertainty. It represents customers', managers', and policymakers' anxiety about prospective futures. From Brexit and US-China trade disputes to the pandemic and Russia-Ukraine war, a series of shocks has kept uncertainty high across the world. The recent shocks to the global economy have brought a new normal for volatility, fueled in certain cases by political fragmentation across countries. These incidents have also increased uncertainty to unprecedented levels, which has hampered economic progress. It is also notable that there is growing awareness about how politicians' policies affect corporate profitability and investment. When there is uncertainty, businesses may need to cut back on production, employee salaries, and, in many cases, corporate investments. Uncertainty has been recognised as a major reason for the slow global recovery from the financial crisis. In this regard, a recent body of research investigates how uncertainty affects corporate financial decisions such as cash holding, capital structure, cost of capital, mergers and acquisitions, and corporate investment. Economic uncertainty is difficult to comprehend since it is not directly evident. In response, economists have created a huge and active literature that aims to measure uncertainty and assess how increased uncertainty affects the economy - both theoretically and empirically. The major difficulty is determining how to quantify uncertainty and identify a suitable proxy for it. Existing proxies for uncertainty are classified into three types: finance-based, forecaster disagreement, and newspaper-based. Stock market volatility is finance based measure of uncertainty. Because of the available in real time and relatively comparable across nations, stock market volatility is a popular proxy for uncertainty. The disadvantage of these stock volatility indicators is that they are only tangentially related to economic activity. Although firm earnings are linked to economic activity, other factors influence much of the short-run fluctuation in stock prices (Cochrane, 2011). Economic uncertainty can also be proxied by measures of forecaster dispersion for economic variables. However, one significant criticism of forecast dispersion metrics is that forecast dispersion and uncertainty are not the same thing. Forecast dispersion may instead reflect disagreement - how widely forecasters differ from one another - rather than uncertainty. The establishment of the newspaper based Economic Policy Uncertainty (EPU) index as a novel technique of measuring uncertainty. The measure's premise is that newspaper coverage may provide information about economic uncertainty, rather than that media coverage creates economic uncertainty. EPU differs from earlier metrics in that it takes into account the frequency of newspaper stories including phrases relating to the economy, policy, and uncertainty. It represents the uncertainty about who will make economic policy decisions, what policies will be implemented, and who will be affected by the economic consequences of those decisions. In the previous decade, the world has faced numerous uncertainties, including the 2008 Global Financial Crisis, the European Debt Crisis, Brexit, the Russian-Ukraine War, and trade wars between the United States and China. Likewise, events like Change of Power at the Centre, Demonitisation, Change in the country's Indirect Tax System by adopting GST, Outbreak of Covid - 19, High crude oil prices, and Unemployment rate all lead to huge rises in uncertainty in India. Over the next few years, India is anticipated to be the world's fastest-growing big economy. Because of its low GDP per capita and enormous catch-up potential, it should be able to achieve annual growth rates in excess of 7%. As a result, the literature is becoming increasingly interested in the impact of EPU on firm-level decisions, asset prices, and a variety of macroeconomic variables. Given the increased level of uncertainty in the Indian economy in recent years, the present paper examines how EPU influences the capital expenditure (CapEx) plans of business entities that are part of the NIFTY 50 index. The NIFTY 50 is India's broad stock market index.

Decisions about capital expenditure are particularly vulnerable to fluctuations in the economy because consumers tend to prioritize more basic needs over capital expenditures when the economy is uncertain (Aizenman and Marion, 1993). From

[1] Corresponding author: amithedau21@gmail.com

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

a financial perspective, firms need regular investment in fixed assets as their business process depends deeply on assets such as building, land, and equipment. Similarly, low investment in fixed assets can cause a decrease in the performance of the firms (Bekiros et al., 2015). Due to its unique nature, it is important to understand which factors affect investment decisions the corporate firms in India.

The main finding is that investment policies in sample companies are negatively affected by EPU. The study's findings are beneficial to a variety of stakeholders, including policymakers, company promoters, capital market participants, and market regulators. The findings of the study can be used to make future investment decisions and gain a better understanding of the country's economic environment.

Five sections make up the remainder of the paper. A survey of the literature is covered in Section two to determine the research gap that is described as conclusion of section 2. The research methodology is covered in Section 3, and the results of the data analysis are covered in Section 4. The study's results and their consequences are discussed in section five. Conclusions, limitations, and the future scope of the research are presented in Section 6.

2. Literature Review

There are an increasing number of studies which analyze the relationship between Economic Policy Uncertainty and investment decisions (Bloom et al., 2007; Colombo, 2013; Bernal et al., 2016; Drobetz et al., 2018; Kong et al., 2022; Jing, 2023). According to (Rajan and Zingales, 1995; Dalbor and Jiang, 2013) capital expenditures are favourably associated with size, growth potential, free cash flow, and company earnings, whereas recession has a negative influence on capital expenditures. Kothari et al., 2002 observed size, earnings, free cash flow, and recession all have statistically significant effects on capital expenditures, whereas growth opportunities have no effect. Financial leverage and the liquidity ratio both have a negative and positive impact on investment. Financial leverage and business size are inversely associated with investment, whereas profitability and liquidity ratios are positively associated with investment. Bhattacharya et al., (2017) examined 43 nations and observed a fall in technological innovation during uncertain periods in the majority of them.

According to **Bhagat et al., (2016),** Indian GDP and fixed investment are negatively associated to EPU in India. **Priyaranjan and Pratap (2020)** develop three alternative indices to quantify the level of uncertainty in the Indian economy. Findings from a Local Projections-based econometric framework reveal that uncertainty shocks have an impact on both financial markets and the Indian real economy. They conclude that when economic uncertainty increases, both investment activity and real GDP growth drop.

Ghosh et al., (2022) did the most recent analysis with regard to India. They empirically investigated the impact of India's economic policy uncertainty (EPU) index on several macroeconomic indicators such as import, export, interest rate, currency rate, inflation rate, and stock market during the pre-COVID-19 and COVID-19 era. Although there is a mature literature on the determinants of corporate investment, there is a scarce number of studies on the investment decisions of Indian firms.

Kumar and Paramanik (2023) sought to calculate the relationship between India's business cycle, financial cycle, and economic policy uncertainty. They discovered that the business and financial cycles are the key shock receivers, whereas policy uncertainty is the primary shock transmitter.

While research has been conducted on the relationship between Economic Policy Uncertainty and macroeconomic variables, there has been little research on how Economic Policy Uncertainty influences corporate investment. This is seen as a significant gap, which opens up a new perspective for investigation. To our knowledge, this is the first study specifically analyzing investment decisions of the Indian firms in light of EPU. Considering this, the present study analyzes how EPU is related to corporate investment among top 50 listed firms from the India for the period of 2010–2023.

3. Research Methodology

Sample Selection and Data Collection

The sample selected for this study covers companies forming part of NIFTY 50 index of Indian capital market. Most of the studies on Indian capital market are conducted using NIFTY 50 index companies as it representative index of broader Indian capital market. The study covers period of 10 years from 2014 to 2023. The study is based on secondary data. The study uses historical financial variables of the sample companies which is regressed against numerical values of dependent variable i.e ratio of corporate investment to total assets. The historical financial information of the sample companies is obtained from PROWESS database maintained by Center for Monitoring Indian Economy (CMIE).

Data Analysis

Data analysis is carried out in three steps, beginning with descriptive statistics and progressing through relationship modelling using regression, followed by robustness check to conclude the findings. Regression analysis is used to model relationships between variables, assess the strength of those correlations, and make predictions based on the models. When this relationship is taken to be linear, either simple linear regression or multiple linear regression is applicable. However, if the relationship between the variables is not linear in the parameters, a number of non-linear techniques could be applied to produce a more accurate regression. In situations when the response variable can only accept binary values (positive or negative), logistic regression is chosen. The result of logistic regression is a function that illustrates how the relationship

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

between the predictors and the likelihood of the event (positive or negative) changes. The present study aims to create a model for categorizing capital expenditure (CapEx) of sample firms into two groups (positive or negative) using logistic regression. To forecast CapEx, a set of firm specific financial variable, change in GDP, Consumer Confidence Index (CCI), and Economic policy uncertainty index (EPU) are used as an independent variable. The brief explanation about the variable is given below:

Variable Description

Dependent Variable – Ratio of Capital Expenditure to Total Asset (CETA)

The dependent variable is corporate investment. According to previous research, the corporate investment is defined as the ratio of capital expenditures to lagged total assets (CETA).

Independent Variables:

Economic Policy Uncertainty Index

The Economic Policy Uncertainty index, which is the important dependent variable in the present study. The EPU index is updated monthly, and the author generated an annual average of the index to match that frequency with the sample's yearly firm-level data. The values of global and India's EPU index are obtained from reliable website policyuncertainty.com which host the EPU data of most of the countries in the world. The negative relations is expected between EPU and dependent variable. The comparative chart of global and India's EPU is shown in Figure 1.

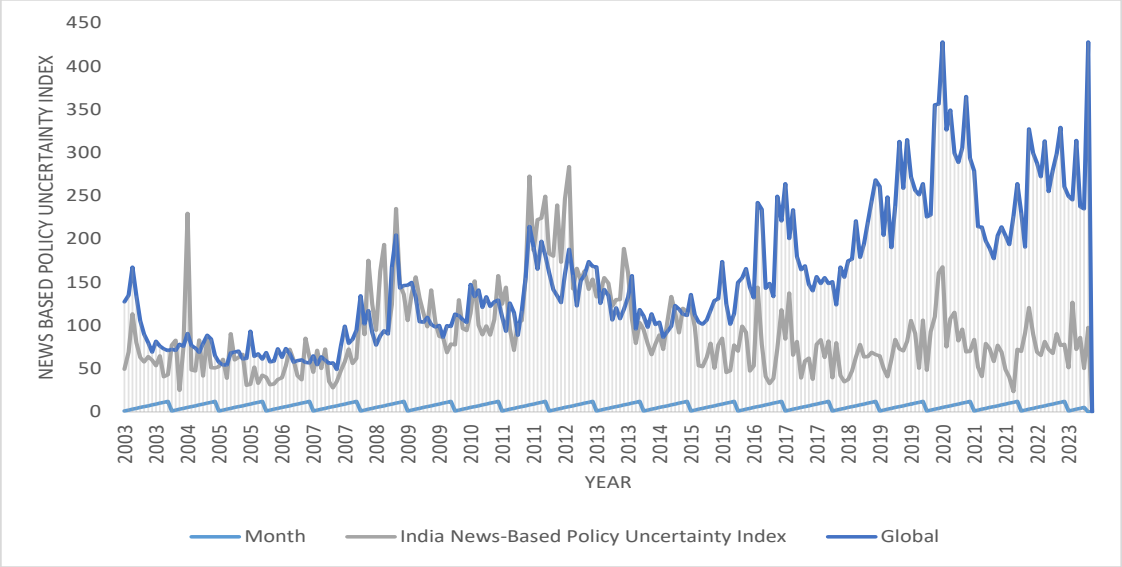

Fig. 1 EPU index of India, Source: https://www.policyuncertainty.com/ (2023 up to May month)

The other independent variables are described in Table 1 as follows:

Sr. No	Variable Name	Formula	Expected Signs
1	Return on Asset (ROA)	Ratio of Net Income to Total Asset	+ve
2	Size (S)	Natural Logarithms of total assets	-ve
3	Leverage (L)	Ratio of total debt to total equity	-ve
4	Market-to-Book Ratio (MB)	Ratio of market value of firms share to its book value	+ve
5	Change in GDP	Provided by www.TRADEINECONOMICS.COM as shown in Figure 2.	+ve
6	Consumer Confidence Index (CCI)	Provided by www.CEICDATA.com as shown in Figure 3.	+ve

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

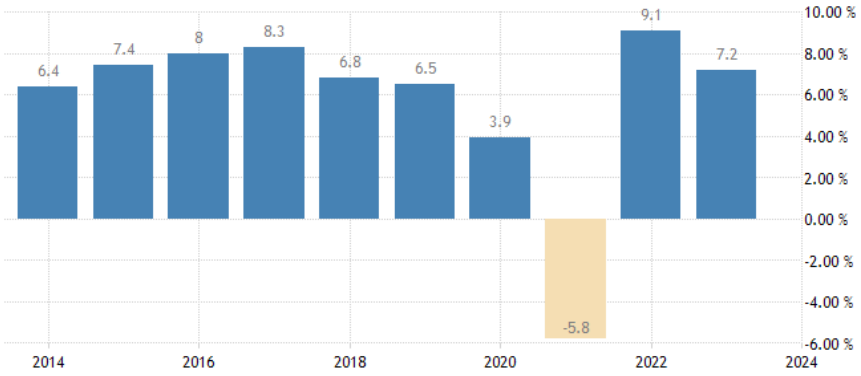

Fig 2 Yearly Change in India's GDP; Source: TRADINGECONOMICS.COM

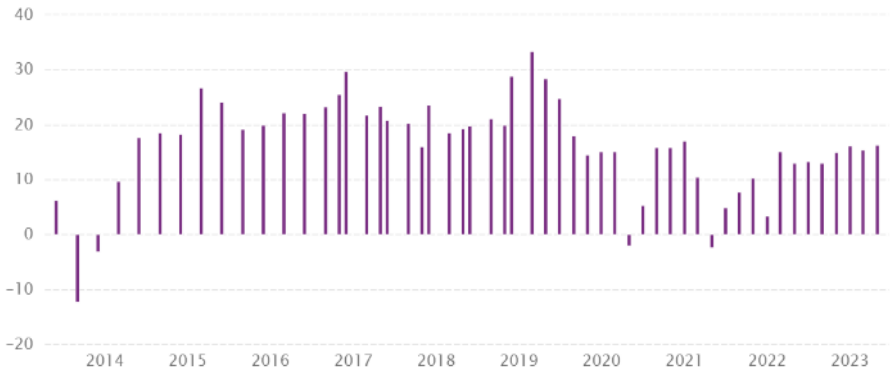

Fig. 3 Consumer Confidence Index: Monthly Data: India; Source: CEICDATA.COM

The model used in this study is as follows:

$$CETA(0,1) = \beta_0 + \beta_1 CETA(t\text{-}1) + \beta_2 ROA + \beta_3 Size + \beta_4 Leverage + \beta_5 Market\text{-}to\text{-}Book\ Value + \beta_6 GDP\ \beta_7 CCI + e \quad \text{Eq... 1}$$

4. Results and discussion

Descriptive statistics

Firms in our sample have an average ratio of capital expenditures to total assets of 6.21%, whereas it rises to 7.79% when considering total revenues. A first approach to the relationship between corporate investment and EPU is shown in Fig. 3, which captures the evolution of the LNEPU7 and CETA variables over the considered period. An inverse relationship can be guessed. Firms in our sample present a relatively high level of growth, 2.486 (proxy by MB) and are of different sizes, highly indebted (on average, the leverage ratio is 39.6%), and profitable (an average ROA of 11.4%). Regarding the macroeconomic variables, the average economic growth in the India over the considered period is 5.78%, while the consumer confidence index is very high (34).

Multivariate analysis

The result of the logistic regression analysis concerning the impact of EPU and firm-specific characteristics on the CETA in Table 2. The result of the chi-square value from the Omnibus Test of Model Coefficients shows that the overall indication of the goodness-of-fit test is highly significant at x2 (8, n = 2190) = 23.88, $p < 0.05$. This means that the model is able to distinguish between the effect of economic policy uncertainty index and investment decisions of the firms. The set of independent variables explained 56.8% (Nagelkerke R2) of the variance in the CapEx incidence, and the model, as a whole, correctly classified 71.4% of the cases into two groups: positive CapEx firms (36.7%) and negative CapEx firms (88.8%). In addition, the results from the Hosmer and Lemeshow's test also support our model as being worthwhile as the chi-square value for the test is 8.168 with a significance level of 0.264. As the value is larger than 0.05, it indicates support for the model.

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

Table 2: Logistic Regression Outcome

	B	S.E.	Wald	df	Sig.	Exp(B)
CETA	-.077	.067	.367	1	.024	.9386
EPU	.114	.092	1.278	1	.011	1.108
ROA	.026	.275	.010	1	.922	1.028
Size	4.122	6.777	3.378	1	.012	80.801
Leverage	-.016	.000	.044	1	.832	.9860
MB	-.014	.000	.044	1	.832	.9860
GDP	-.014	.000	.045	1	.832	.9860
CCI						
Nagelkerke R^2	.568					
n	108					
Classification Rate (%)	71.40					
Good Performance (%)	36.70					
Poor Performance (%)	88.800					
Hosmer and Lemeshow Test	0.264					

Source: Outcome of Data Analysis

Referring to Table 2, five of the independent variables, namely, Return on Asset (ROA), Size (S), Leverage (L), Market-to-book Value (MB), and Change in GDP made unique statistically significant contributions to the model. A positive and significant relationship is found between the return on asset variable and the incidence of CapEx at the 5% level. The result confirms to the fact that that firms with high profitability have potentially more profitable investment opportunities. With regards to SIZE, the result shows that there is negative and significant.

In relation to Leverage variable, the negative and significant coefficient of firm leverage is in line with the overinvestment theory. Given that debt can be used by shareholders as a mechanism to overcome the overinvestment issue created by managers by limiting the free cash flows, so the managers must issue more debt, which may tightens the investment plans of the companies. About Market-to-book ratio, coefficient is positive and significant, confirming that companies with high market-to-book ratio must invest to realize their growth opportunities

The coefficients of LNEPU are negative and significant at 1% or 5% significance level. Specifically, LNEPU coefficient is - 0.121, what means that a 1% increase in LNEPU has an estimated 12.1% decrease in capital expenditures to total assets ratio. These results confirm that when Economic Policy Uncertainty rises, sample companies will not follow capital intensive investments and postpone their expansionary to a more certain period.

Lastly, among the included macroeconomic variables, only the lagged GDP growth is positively related to capital expenditures. This positive relationship is in line with previous research. The non-significant coefficient for CCI may be related to the fact that the consumer expectations do not affect investment policy decisions of sample firms.

Results of Robustness Test

According to the empirical design, author has perform a quantile regression study. While the significance and relationship of control variables remains the same for the four groups, the effect of Economic Policy Uncertainty ceases to be relevant when considering the current value of (LNEPU) for the third and the fourth quantile. Further, the firms at lower quantiles of capital ratio might prefer to hold their investment decisions until any uncertainty is resolved.

5. Discussion and policy implications

Since the commencement of the 2008 global financial crisis, there has been a surge in interest in how to manage uncertainty in businesses, and India is no exception. Following the globalisation wave and the IT boom from the year 2000 onwards, India had decades of steady economic expansion with minimal obstacles such as corporate fraud, natural calamities, and political problems. As a result, investigating the mechanisms by which such uncertainty are conveyed to businesses becomes important. When there is uncertainty, business firms are among the first to suffer, since clients may decide to postpone or even cancel their purchasing decisions. In support of this claim, the author discovers that EPU has a negative impact on the investing mentality of Indian enterprises. This has a number of implications for various economic participants. Governments and regulatory agencies should be aware of this detrimental influence on investment. Reduced investments owing to uncertainty will depress company growth rates, which will have a negative impact on economic growth. To reduce uncertainty, governments should implement transparent decision-making processes and stable economic policies. This will result in a more favourable investment climate. However, in other cases where the major source of

European Economic Letters
ISSN 2323-5233
Vol 14, Issue 1 (2024)
https://doi.org/10.52783/eel.v14i1.1194
http://eelet.org.uk

uncertainty may be external, reducing uncertainty may be difficult. To reduce ambiguity, policymakers, lawmakers, and regulatory agencies should make credible declarations and behave consistently. Furthermore, they should implement the required policy consequences to improve India's economic environment. Governments, for example, can offer alternative financing channels for investment because, during uncertain times, banks may be hesitant to give loans by raising credit standards. Regularity bodes can adopt a risk-sharing approach and, to some extent, guarantee the loan. They can act as a guarantor for businesses who are unable to obtain a loan. Another option is to offer incentives to corporations making investment decisions, such as tax breaks, tax extensions, and land distribution. A drop in investment reduces enterprises' ability to meet demand, reduces revenue, and results in less satisfied customers. As a result, organisations should regularly monitor trends in uncertainty and diversify their business verticals to reduce their exposure to uncertainty. Firms can look for alternative financing to finance their investments in overseas markets.

6. Conclusion, Limitations and Future Scope

The present study analyze the relation between EPU and corporate investment among the top 50 listed firms from the India for the period of 2010–2023. It is possible that the influence of EPU on volatility in the Indian corporate sector may result in negative investment circumstances for prospective investors. Even the many macroeconomic indicators will suffer from the volatility caused by EPU over a lengthy time horizon. The present research is the first in terms of analyzing the impact of Economic Policy Uncertainty on investment decisions of Indian companies, confirming that uncertainty increases the value of the option to wait until more information about the profitability of the projects is revealed. Author have used panel quantile methodology to enrich results given that the applications of this methodology are incipient in the emerging countries like India. The study does have certain limitations, though. The study's findings depend on how reliable the secondary data are that were utilized to support them. Secondly, not all of the variables that affect sample company performance are taken into account in this research, primarily due to their unavailability in the database. However, it can be anticipated that initiatives like this study will increase discussion of the subject and provide justification for more investigation in this field, particularly in the context of India

References

Aizenman, J., & Marion, N. P. (1993). Policy uncertainty, persistence and growth. *Review of international economics*, *1*(2), 145-163. https://doi.org/10.1111/j.1467-9396.1993.tb00012.x

Bekiros, S., Gupta, R., & Paccagnini, A. (2015). Oil price forecastability and economic uncertainty. *Economics Letters*, *132*, 125-128. https://doi.org/10.1016/j.econlet.2015.04.023

Bernal, O., Gnabo, J. Y., & Guilmin, G. (2016). Economic policy uncertainty and risk spillovers in the Eurozone. Journal of International Money and Finance, 65, 24-45. https://doi.org/10.1016/j.jimonfin.2016.02.017

K. N. Vhatkar and G. P. Bhole, "Optimal container resource allocation in cloud architecture : A new hybrid model," Journal of King Saud University - Computer and Information Sciences, vol. 34, no. 5, pp. 1906–1918, 2022, doi: 10.1016/j.jksuci.2019.10.009.

Bhagat, S., Ghosh, P., & Rangan, S. (2016). Economic policy uncertainty and growth in India. Economic and Political Weekly, 72-81. http://dx.doi.org/10.2139/ssrn.2246882

Kumbhare, S. , B.Kathole, A. , Shinde, S., "Federated learning aided breast cancer detection with intelligent Heuristic-based deep learning framework", Biomedical Signal Processing and Control Volume 86, Part A, September 2023, 105080 https://doi.org/10.1016/j.bspc.2023.105080 https://www.sciencedirect.com/science/article/pii/S174680942300513X

Bhattacharya, U., Hsu, P. H., Tian, X., & Xu, Y. (2017). What affects innovation more: policy or policy uncertainty?. Journal of Financial and Quantitative Analysis, 52(5), 1869-1901. https://doi.org/10.1155/2017/2165731

Bloom, N., Bond, S., & Van Reenen, J. (2007). Uncertainty and investment dynamics. The review of economic studies, 74(2), 391-415. https://doi.org/10.1016/j.ribaf.2017.07.048

Cochrane, J. H. (2011). Presidential address: Discount rates. *The Journal of finance*, *66*(4), 1047-1108. https://doi.org/10.1111/j.1467-9396.1993.tb00012.x

Colombo, V. (2013). Economic policy uncertainty in the US: Does it matter for the Euro area? Economics Letters, 121(1), 39-42. https://doi.org/10.1016/j.econlet.2013.06.024

Dalbor, M., & Jiang, L. (2013). Determinants of capital expenditures in the US restaurant industry. *The Journal of Hospitality Financial Management*, *21*(2), 77-86. https://doi.org/10.1080/10913211.2013.860853

Drobetz, W., El Ghoul, S., Guedhami, O., & Janzen, M. (2018). Policy uncertainty, investment, and the cost of capital. Journal of Financial Stability, 39, 28-45. https://doi.org/10.1016/j.jfs.2018.08.005

K. N. Vhatkar and G. P. Bhole, "Improved rider optimization for optimal container resource allocation in cloud with security assurance," International Journal of Pervasive Computing and Communications, vol. 16, no. 3, pp. 235–258, 2020, doi: 10.1108/IJPCC-12-2019-0094.

Ghosh, R., Bagchi, B., & Chatterjee, S. (2022). The effect of economic policy uncertainty index on the Indian economy in the wake of COVID-19 pandemic. *Journal of Economic and Administrative Sciences*. https://doi.org/10.1108/JEAS-08-2021-0172

Atul B. Kathole,Jayashree Katti,Dharmesh Dhabliya,Vivek Deshpande,Anand Singh Rajawat,S. B. Goyal,Maria Simona Raboaca,Traian Candin Mihaltan,Chaman Verma and George Suciu, "Energy-Aware UAV Based on Blockchain Model Using IoE Application in 6G Network-Driven Cybertwin" Energies 2022, 15(21), 8304; https://doi.org/10.3390/en15218304. https://www.mdpi.com/1996-1073/15/21/8304

Jing, Z., Lu, S., Zhao, Y., & Zhou, J. (2023). Economic policy uncertainty, corporate investment decisions and stock price crash risk: Evidence from China. Accounting & Finance, 63, 1477-1502. https://doi.org/10.1111/acfi.13077

Kong, Q., Li, R., Wang, Z., & Peng, D. (2022). Economic policy uncertainty and firm investment decisions: Dilemma or opportunity?. International Review of Financial Analysis, 83, 102301. https://doi.org/10.1016/j.irfa.2022.102301

Kothari, S. P., Laguerre, T. E., & Leone, A. J. (2002). Capitalization versus expensing: Evidence on the uncertainty of future earnings from capital expenditures versus R&D outlays. Review of accounting Studies, 7(4), 355-382. DOI https://doi.org/10.1023/A:1020764227390

S. Nagaraj ,Atul B. Kathole ,Leena Arya,Neha Tyagi ,S. B. Goyal, Anand Singh Rajawat ,Maria Simona Raboaca ,Traian Candin Mihaltan ,Chaman Verma and George Suciu , "Improved Secure Encryption with Energy Optimization Using Random Permutation Pseudo Algorithm Based on Internet of Thing in Wireless Sensor Networks", Energies 2023, 16(1), 8; https://doi.org/10.3390/en16010008. https://www.mdpi.com/1996-1073/16/1/8

Kumar, K., & Paramanik, R. N. (2023). Dynamic Connectedness among Business Cycle, Financial Cycle, and Policy Uncertainty Index in India. Advances in Decision Sciences, 27(1), 23-42. https://doi.org/10.47654/v26y2023i4p127-146

Priyaranjan, N., & Pratap, B. (2020). Macroeconomic effects of uncertainty: a big data analysis for India. Priyaranjan, N., & Pratap, B.(2020). Macroeconomic Effects of Uncertainty: A Big Data Analysis for India. RBI Working Paper, (04). http://dx.doi.org/10.2139/ssrn.3852940

K. N. Vhatkar and G. P. Bhole, "Particle swarm optimisation with grey wolf optimisation for optimal container resource allocation in cloud," IET Networks, vol. 9, no. 4, pp. 189–199, 2020, doi: 10.1049/iet-net.2019.0157.

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The journal of Finance*, *50*(5), 1421-1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Yarba, I., & Güner, Z. N. (2020). Uncertainty, macroprudential policies and corporate leverage: Firm-level evidence. Central Bank Review, 20(2), 33-42. https://doi.org/10.1016/j.cbrev.2020.03.005