

# THE MANAGEMENT ACCOUNTANT

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## EMERGING TRENDS IN TELECOM INDUSTRY IN INDIA

*Journal of*

**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA**

(Statutory Body under an Act of Parliament)

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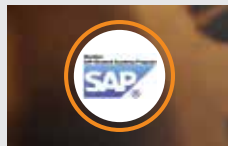
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- THE INSTITUTE OF COST ACCOUNTANTS OF INDIA (erstwhile The Institute of Cost and Works Accountants of India) was established in 1944 as a registered company under the Companies Act with the objects of promoting, regulating and developing the profession of Cost Accountancy.
- On 28 May 1959, the Institute was established by a special Act of Parliament, namely, the Cost and Works Accountants Act 1959 as a statutory professional body for the regulation of the profession of cost and management accountancy.
- It has since been continuously contributing to the growth of the industrial and economic climate of the country.
- The Institute of Cost Accountants of India is the only recognised statutory professional organisation and licensing body in India specialising exclusively in Cost and Management Accountancy.

## MISSION STATEMENT

“The CMA Professionals would ethically drive enterprises globally by creating value to stakeholders in the socio-economic context through competencies drawn from the integration of strategy, management and accounting.”

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“The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally.”

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- to ensure sound professional ethics
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असतोमा सद्गमय  
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मृत्योर्मा मृतं गमय  
ॐ शान्ति शान्ति शान्तिः

From ignorance, lead me to truth  
From darkness, lead me to light  
From death, lead me to immortality  
Peace, Peace, Peace

### Delhi Office

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# EDITORIAL

Telecom companies are at an inflection point witnessing a broad landscape of significant changes. There has been a business and customer model disruption, with technologies like AI, big data and the internet of things redefining service-delivery and value-capture models, while start-ups/OTT setting new standards for seamless customer experience. With the pandemic staggering the world in the last two years, the recovery post pandemic has shifted the focus to supporting consumers and businesses through digital transformation and building an ecosystem that adds value. Consumers are heavily relying on bandwidth as activities like remote learning, work from home and gaming have become permanent.

With telcos being the backbone of digital services, it is imperative for them to move beyond connectivity and lead digitization from the forefront to support the growing demand for digital services. With the spectrum auctions taking place now, India can expect by the end of the year to join the ranks of countries with 5G telecom networks. It will also bring a radical change to the telecom sector in India. Telecom companies will need to reinvent themselves to stay relevant and competitive in the enterprise segment.

The telecom industry has noticed a significant reduction in the time it takes to get permissions for the installation of telecom towers and the laying of optical fibre cables across all states since the portal's inception. Prime Minister of India's Gati Shakti Master Plan is a major boost to developing a robust telecom infrastructure in our country, and it is imperative to develop 'state-of-art' network architecture just like other infrastructure facilities such as railway, roads and transportation, and so on, as telecommunication services have become an integral and essential necessity of our daily lives. The advent of Gati Shakti Sanchar Portal has proven to be a game changer in terms of getting long-awaited Right of Way (RoW)

applications approved quickly and efficiently. This is actually a one-step forward towards 'Ease of Doing Business', bringing transparency, accountability and responsiveness to all telecom stakeholders while processing the application. Also providing a strong mechanism to achieve the National Digital Communication Policy-2018 goal of 'Broadband to All.

Further, Prime Minister of India's vision Atmanirbhar Bharat is taking concrete steps in Telecom equipment manufacturing. Production Linked Incentive scheme in telecom sector was launched in 2021. A total of 31 companies are existing beneficiaries for manufacturing of various telecom equipment under the PLI scheme. To promote the entire value-chain in telecom manufacturing, Design-led PLI was launched in June 2022. It provided additional incentives of 1% over and above the existing incentives for products that are designed in India. A total of 32 companies have submitted applications. 17 of these 32 companies have applied as Design-led manufacturers and remaining as Production linked manufacturers. It is heartening that 18 new companies have submitted applications. India is poised to emerge as a design and manufacturing hub for telecom and networking equipment.

The prospect of future competition as well as the evolving needs of their enterprise clients is also making Telcos change the way they have traditionally operated. In their new avatars they will be providers and aggregators of private 5G enterprise services that include solutions in platform, analytics, security and more. Though, Indian telcos are better placed in terms of technology solutions than peers in many other geographies as a delayed entry into 5G has allowed them to leapfrog ahead.

Moreover, professionals like CMAs can suggest the Government by applying Social Cost Benefit Analysis technique to determine whether active or infrastructure sharing are feasible or not for a proposed project. Again, SCBA



also facilitates apt planning, decision-making, evaluation and controlling of project costing. With the help of various cost management techniques, CMAs help to identify the constraint factors that limit the performance of telcos. The CMAs can frame cost competitive tariff and subsidy mechanism to ensure availability of quality service to consumers at reasonable and competitive rates, ensure financial viability of the sector and attract investments, promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks as well as promote competition in addition to efficiency in operations.

A practicing Cost Accountant is authorized to appear for Telecom Disputes Settlement Appellate Tribunal to resolve the disputes of the service providers. He may even render advisory services to the companies in telecom industry regarding policy decision, cost reduction, maintaining the quality, initiating innovative schemes and carrying out audit for Metering and Billing Accuracy through his professional expertise in costing and accounting. He can also perform Audit of Digital Addressable System -in accordance with the regulatory framework for digital addressable systems comprising of the "Telecommunication (Broadcasting and Cable) Service Interconnection (Addressable Systems) Regulations, 2017, "Telecommunication (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) Regulations, and "Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017. CMAs are also eligible for Reporting and Audit for System on Accounting Separation- Certification Work.

This issue presents a good number of articles on the cover story "Emerging trends in Telecom Industry in India" written by distinguished experts. Further, we look forward to constructive feedback from our readers on the articles and overall development of the Journal. Please send your emails at [editor@icmai.in](mailto:editor@icmai.in). We thank all the contributors to this important issue and hope our readers will enjoy the articles.

# THE MANAGEMENT ACCOUNTANT

## PAPERS INVITED

Cover Stories on the topics given below are invited for *'The Management Accountant'* for the four forthcoming months

December 2022	<b>Theme</b> Future of Accounting Profession: Challenges & Opportunities	<b>Subtopics</b> <ul style="list-style-type: none"> <li>⊙ International Financial Reporting Standards (IFRS) and Corporate Governance</li> <li>⊙ Green Accounting – A tool to quantify Environmental Sustainability</li> <li>⊙ Accounting Information System (AIS): An Overview</li> <li>⊙ Demystify the ESG landscape: Best Practices for ESG reporting, and the critical role for Finance Professionals</li> <li>⊙ Changing role of New Gen Accountants in Rebuilding the global economy post Pandemic</li> <li>⊙ Sustainability Accounting and Reporting</li> <li>⊙ Digital Financial Reporting: The Way Forward</li> <li>⊙ Rebooting of accounting skillsets to stay competitive in the digital age</li> <li>⊙ Accounting for Cryptocurrencies</li> </ul>
January 2023	<b>Theme</b> Emerging Trends in Banking: Transforming Customer Experience	<b>Subtopics</b> <ul style="list-style-type: none"> <li>⊙ Privatization of Public Sector Banks (PSBs): A Boon or Bane</li> <li>⊙ Evolution of Smart Data, RPA &amp; AI in Indian Banking Sector</li> <li>⊙ Metaverse: the next frontier for the Digital Banking</li> <li>⊙ Neo-banking: Shaping the future of India's direct-to-consumer (D2C) ecosystem</li> <li>⊙ Linkage of Core Banking System and India Post: A welcoming approach</li> <li>⊙ Credit outreach drive by PSBs as a part of Azadi Ka Amrit Mahotsav</li> <li>⊙ Enhanced Access and Service Excellence (EASE) 5.0, a 'Common reforms agenda' for PSBs</li> <li>⊙ 3-yr roadmap strategy to support SMEs and farming under EASE reforms</li> <li>⊙ Retail Banking in India: Re-inventing and repositioning to attain Financial Wellness</li> <li>⊙ Setting New Standards to achieve Governance, Transparency and Excellence-Role of CMAs</li> </ul>
February 2023	<b>Theme</b> Infrastructure Investment in Emerging Markets: Trends and Challenges	<b>Subtopics</b> <ul style="list-style-type: none"> <li>⊙ Indian Infrastructure: Leveraging past experiences for Future Growth</li> <li>⊙ Debt Sustainability of Infra Investment</li> <li>⊙ Infrastructure Resilience Post Pandemic</li> <li>⊙ Investing in Energy Infrastructure for the Climate Transition</li> <li>⊙ Strengthening Infrastructure Governance</li> <li>⊙ Integration of ESG - SDG factors for infrastructure Investment Decisions</li> <li>⊙ Financing Quality Infrastructure Investment in the Asian Economies</li> <li>⊙ Achieving Sustainability and Cost Competitiveness through apt Infra Investment</li> <li>⊙ Framing Guidance for Implementing Quality Infrastructure Investment: Role of CMAs</li> </ul>
March 2023	<b>Theme</b> Corporate Governance: A pathway to Economic Sustainability	<b>Subtopics</b> <ul style="list-style-type: none"> <li>⊙ Robust governance: a key factor in driving long-term, sustainable growth</li> <li>⊙ Board Room Challenges in the Post-Pandemic era</li> <li>⊙ Board's Role in strengthening Governance to accelerate Environmental, Social and Governance (ESG)</li> <li>⊙ Integrating CSR into the Corporate Governance Framework</li> <li>⊙ The Two Sides of the Governance Coin: Competition and Regulation</li> <li>⊙ Regulation in Corporate Governance; in India and Elsewhere</li> <li>⊙ Drivers – the impact of the credit crunch</li> <li>⊙ Essential ingredients of good governance</li> <li>⊙ Startup Governance: Crucial Building Block for Sustainable Success</li> <li>⊙ Corporate Governance in the forthcoming years: what more to add on</li> </ul>

*The above subtopics are only suggestive and hence the articles may not be limited to them only.*

Articles on the above topics are invited from readers and authors along with scanned copies of their recent passport size photograph and scanned copy of declaration stating that the articles are their own original and have not been considered for anywhere else. Please send your articles by e-mail to [editor@icmai.in](mailto:editor@icmai.in) latest by the 1<sup>st</sup> week of the previous month.



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## CMA P. Raju Iyer

President

The Institute of Cost Accountants of India

*“Experience is the only teacher we have. we may talk and reason all our lives, but we shall not understand a word of truth.”*

- Swami Vivekananda

My Dear Professional Colleagues,

I, on behalf of the Institute and all its stakeholders extend our heartiest congratulations and best wishes to Shri Manoj Govil, IAS on his appointment as the Secretary to the Government of India, Ministry of Corporate Affairs. I along with CMA Vijender Sharma, Vice President of the Institute extended greetings to Shri Manoj Govil ji on 2<sup>nd</sup> November 2022 in New Delhi and discussed the matters related to professional developments and ongoing activities of the Institute.

### Meetings with dignitaries

#### ☉ Chairman, Commission for Agricultural Costs & Prices (CACP)

I am happy to inform that a delegation from the Institute led by me had a meeting with Shri Vijay Paul Sharma, Chairman, Commission for Agricultural Costs & Prices (CACP), Ministry of Agriculture & Farmers Welfare on 10<sup>th</sup> October, 2022 to discuss the proposal submitted by the Institute to conduct a Pilot Study on the Cost of Cultivation of major Agricultural crops under the Activity Based Costing (ABC) Approach. The said delegation comprised of CMA Vijender Sharma, Vice President, CMA

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Chittaranjan Chattopadhyay, Chairman, BFSI Board, CMA (Dr.) K Ch A V S N Murthy, Chairman, Task Force on Agri Cost Management, CMA B.B. Goyal, Former Addl Chief Advisor (Cost), MoF, GoI, CMA (Dr.) Sreehari Chava, Convenor, Task Force on Agri Cost Management, CMA (Dr.) D.P. Nandy, Senior Director & Secretary, Task Force on Agri Cost Management, Dr. Pinak Pani Pal, Associate Professor, Indian Statistical Institute (ISI), Kolkata and Dr. Praveen Jain, Professor, IGNOU.

#### ☉ Meeting with Secretary PESB

I wish to inform you that CMA Biswarup Basu, Immediate Past President and CMA B. B. Goyal, Advisor of the Institute and Former Addl. Chief Adviser (Cost), Ministry of Finance had a meeting with Smt. Kimbuong Kipgen, Secretary, Public Enterprises Selection Board (PESB) on 14<sup>th</sup> October, 2022 and submitted a representation requesting PESB to reconsider our submissions and bring justice for the Cost Accountant fraternity by restoring original qualifications for Director (Finance) in Central PSEs.

#### ☉ Meeting with Chairperson SEBI

I am pleased to inform that I along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board, CMA Debasish Mitra, Chairman, Board of Advanced Studies & Research, CMA (Dr.) Ashish P. Thatte, Chairman, Corporate Laws Committee, CMA B.B. Goyal, Advisor of the Institute and Former Addl Chief Advisor (Cost), MoF, GoI, CMA (Dr.) Sunder Ram Korivi, Former Dean of NISM, Academic Head of HSCN University, Adjunct professor of IICA and member of BFSI Board of the Institute had a meeting with Ms. Madhabi Puri Buch, Chairperson, Securities and Exchange Board of India (SEBI) on 1<sup>st</sup> November, 2022 to discuss and make a presentation on the representation submitted by the Institute to allow CMAs to function as Social Auditors (SAs) and Institute to promote a section 8 company to function as Self-Regulatory Organization (SRO) for the Social Auditors.

#### SAFA Meetings and events in Dhaka, Bangladesh.

The Institute of Chartered Accountants of Bangladesh hosted the SAFA meetings and International Conference in Dhaka, Bangladesh on 15<sup>th</sup> and 16<sup>th</sup> October, 2022.

CMA H. Padmanabhan, Chairman International Affairs Committee of the Institute & Chairman of SAFA PAIB Committee, CMA (Dr.) V. Murali, Member of SAFA



International Relations Committee, CMA Niranjan Mishra Member of SAFA Small and Medium Practices Committee and CMA Papa Rao Sunkara, Member of SAFA Committee to study Fiscal regimes and other statutory requirements of business in SAARC countries attended their respective Committee meetings on 15<sup>th</sup> October, 2022. I along with CMA Vijender Sharma, Vice President of the Institute attended the SAFA Board meeting on 16<sup>th</sup> October, 2022. The delegation of the Institute also attended the SAFA International Conference 2022 titled "Regional Connectivity for Sustainable Growth" hosted by ICAB on 15<sup>th</sup> October, 2022.

### **Award of SAFA Membership to CA Maldives**

The Institute of Chartered Accountants of the Maldives organized the Maldives Accountants Forum (MAF) 2022 from 29<sup>th</sup> October 2022 to 30<sup>th</sup> October 2022. One of the main highlights of MAF 2022 was the awarding of SAFA membership to CA Maldives.

I was invited by CA Maldives to participate and share my views on Tax Reform Agenda during MAF 2022. CMA Vijender Sharma, Vice President, CMA H. Padmanabhan, Chairman, International Affairs Committee and my council colleagues CMA Niranjan Mishra, CMA (Dr.) V. Murali, CMA (Dr.) Ashish P. Thatte, CMA Paparao Sunkara and CMA Debasish Mitra also participated in MAF 2022 on invitation from CA Maldives to witness the awarding of SAFA membership to CA Maldives.

I convey my heartiest congratulations to CA Maldives and I am sure it will make a contribution towards further strengthening of the accountancy profession and economic development of South Asian Region.

### **Regional CMA Convention - 2022, Chennai**

I am happy to inform that the Southern India Regional Council of the Institute organised the Regional CMA Convention - 2022 on 4<sup>th</sup> and 5<sup>th</sup> November 2022 at Hotel Le Royal Meridien, Chennai. I had the privilege of participating and interacting with around 400 members, industry representatives, and Government officials. The convention was inaugurated by Padmashree CA T N Manoharan and CMA D Sundaram, Vice Chairman & MD - TVS Capital Funds delivering the plenary address.

Technical Sessions were handled by CMA S Bhargava, Apollo Hospitals, CMA Sukrut Mehta, CMA Umesh Dongre, Dr. Susselendra Desai, CMA S Dorairajan, CMA A Vadivel, CA Anand Prakash Jangid, CMA [Prof.] Arindam Bannerjee and CMA A N Raman.

The Valedictory Session was graced by His Excellency Thiru. R.N. Ravi, Hon'ble Governor of Tamilnadu and he highlighted the role of Cost and Management Accountants in the inclusive holistic integrated development of the nation and restoring the glory of this nation. The cultural

evening hosted by Shri Shankarlal Shasun Jain College made an impression in all our minds on the rendition on the dance forms of South India. I wholeheartedly thank the Hon'ble Governor of Tamil Nadu for his esteemed presence. I appreciate the efforts taken by CMA Sankar P Panicker, CMA R Vishwanath Bhat, CMA Vijay Kiran Agastya, CMA Rajesh Sai Iyer, CMA Rakesh Shankar Ravisankar and SIRC officials for the wonderful co-ordination.

### **Launch of Certificate Course in Health Care Finance with Sri Ramachandra Institute of Higher Education and Research**

Sri Ramachandra Faculty of Management Sciences, SRIHER, Chennai in association with the Institute has launched a Certificate Course in Healthcare Finance. I along with Past President of Institute - CMA M Gopalakrishnan, CMA Sankar Panicker, - Chairman - SIRC, CMA Vishwanath R Bhat, Vice Chairman - SIRC, CMA Vijay Kiran Agastya, Secretary - SIRC participated in the launch programme held on 3<sup>rd</sup> November 2022 at the University Campus, Chennai. CMA Suresh R Gunajalli, CMA Sanyasi Rao, Past Chairmen made their gracious presence. Dr. Mahesh Vakamudi, Dean of faculties, Shri. Ravishankar, Director Finance applauded the efforts of the Institute. Dr. K C John, Director - SRFMS and Dr. Selvam Jessiah - Principal welcomed our efforts in promoting academia-industry relationship. Dr. A S Poornima and CMA Rakesh Shankar Ravisankar coordinated the launch of course. Registration for the course is overwhelming.

*I now present a brief summary of the activities of various Departments/Committees/ Boards of the Institute, in addition to those detailed above:*

### **BANKING, FINANCIAL SERVICES AND INSURANCE BOARD**

The Banking, Financial Services & Insurance Board of the Institute and the BFSI department continued to chalk out and continue its various activities and initiatives during the month of October 2022 under the active leadership of CMA Chittaranjan Chattopadhyay, Chairman of the BFSI Board, a synopsis of which is presented below:

#### **A. Observance of World Investor Week (WIW) 2022**

The World Investor Week (WIW) 2022 is a global campaign which was celebrated under the aegis of IOSCO and SEBI, from 10<sup>th</sup> to 16<sup>th</sup> October, 2022 to raise awareness about the importance of investor education and protection. To commemorate the campaign, the Banking, Financial Services and Insurance Board (BFSIB) of The Institute had organized a series of webinars to observe the World Investment Week from 11<sup>th</sup> to 16<sup>th</sup> October, 2022 for the benefit of all stakeholders and spreading the message of proper investor education.

First Webinar was organized on the topic 'Whats Your financial Gameplan', where the speaker was CMA Malhar Mazumder, Wealth Management Consultant on 13<sup>th</sup> October. Second Webinar on the topic 'India Equity View Amidst Global Turmoil', where the speaker was CMA Dhiraj Sachdev, Financial Advisor was organized on 15<sup>th</sup> October and Third Webinar on the topic "Basic Mathematics for Financial Planning" where the speaker was Shri Dibyendu Mukherjee, Personal Finance Professional was organized on 16<sup>th</sup> October.

For those who missed the events due to preoccupation, all such presentations are uploaded in the BFSIB portal as a part of knowledge sharing endeavour of the Board.

### **B. Capital Market Symposium at Kolkata.**

A mega Symposium on Capital Market on the topic 'Financial freedom through Stock Marketing Investing' was organized at The Hotel Hindustan International, Kolkata and also streamed online. The event was a ground breaking fireside chat between CMA Basant Maheshwari, Portfolio Manager and an icon of the profession and CMA (Dr.) Sunder Ram Korivi, Member of the BFSI Board and renowned academician who is presently Adjunct Professor Indian Institute of Corporate Affairs (IICA), established by the Ministry of Corporate Affairs, Government of India.

The event was participated in person by various professionals, members of the Institute and dignitaries, including CMA Harijiban Banerjee, Past President; CMA Amal Kumar Das, Past President; CMA Amitava Sinha, Director (Finance), Jute Corporation of India and many others. CMA Chittaranjan Chattopadhyay, Chairman BFSIB and Council Member and CMA Biswarup Basu, Immediate Past President and Council Member also addressed the participants while setting the ball rolling towards an electrifying fireside chat event which witnessed a barrage of questions from the participants during the Q&A session which followed the fireside chat.

The programme also witnessed an overwhelming response on the official YouTube channel of the Institute where number of views surpassed 4300 soon after upload, anyone desirous of viewing it at their leisure can do so on the link <https://youtu.be/oagT4XYVy-A>.

### **C. Webinar on Infrastructure Financing**

Shri Subhendu Moitra, Financial Advisor and Former Chief Credit Officer, IIFCL took a webinar on the topic of 'Infrastructure Financing' on 21<sup>st</sup> October, 2022 and presented the various infrastructure projects and the mechanism of financing covering the challenges and opportunities.

### **D. Publishing of 11<sup>th</sup> Issue of BFSI Chronicle**

BFSI Board released the 11th issue of the BFSI Chronicle

on 30<sup>th</sup> September, 2022. It covered various articles in the BFSI sector and I hope the readers would benefit with such thought provoking articles for knowledge enhancement of members and others.

### **E. Representation letters for inclusion of CMAs**

The BFSIB continues its efforts for further development of the profession in the BFSI sector with representations to authorities and employers for inclusion of CMAs in the sector. I am happy to announce that –

- ▲ CMAs, both individuals and in practice are included to conduct Due Diligence Audit in Punjab National Bank for both Indore and Bhopal.
- ▲ PFRDA has included CMAs for the post of Officer Grade-A (Assistant Manager). State Bank of India has also included CMAs for the post of Circle Based Officers.
- ▲ We have sent representation to various Banks for inclusion of CMAs in various posts and with proper follow up we hope to have our names included in coming days for all Banks.

### **F. Exposure Draft of Insurance and Regulatory Development Authority of India (Registration of Indian Insurance Companies) Regulations, 2022**

The BFSI Board had provided the representation on the Exposure Draft of Insurance and Regulatory Development Authority of India (Registration of Indian Insurance Companies) Regulations, 2022 based on the various feedback received from various Bankers and we hope that CMAs would be included in the final Notification to be issued by the IRDAI.

### **G. Reserve Bank of India released the Draft Master Directions – Information Technology Governance, Risk, Controls and Assurance Practices Guidelines**

The BFSI Board is seeking comments on the Draft Master Directions – Information Technology Governance, Risk, Controls and Assurance Practices Guidelines. The last date of submission of comments/suggestions is 15<sup>th</sup> November, 2022 to [bfsi@icmai.in](mailto:bfsi@icmai.in). I urge stakeholders to write to us with their views and comments.

### **H. Sale of Aide Memoire on Infrastructure Financing**

The handbook which was released by the BFSIB, titled 'Aide Memoire on Infrastructure Financing' for benefit of all stakeholders and was very well accepted by stakeholders and now is reprinted with ISBN No which will ensure wider reach to reach across the unreached. The members, students and others can get their copies through online purchase via the link [https://eicmai.in/booksale\\_bfsi/Home.aspx](https://eicmai.in/booksale_bfsi/Home.aspx).

### I. Workshop on Due Diligence in Banks

BFSIB is organizing a workshop on how to conduct the due diligence work in Banks for 3 days from 4<sup>th</sup> to 6<sup>th</sup> November, 2022 the details of which are uploaded on the BFSIB portal.

### BOARD OF ADVANCED STUDIES & RESEARCH

I am pleased to inform that the 3rd batch of Diploma in Information System Security Audit (DISSA) and the 2nd batch of Diploma in Forensic Audit (DFA) have been started successfully with a good number of professionals. I must congratulate CMA Debasish Mitra, Chairman - Board of Advanced Studies & Research and the staff members of the Board for their sincere effort to run these professional courses on a regular basis for the benefit of the CMA fraternity.

### CONTINUING EDUCATION PROGRAMME COMMITTEE

During the month, around Thirty Five webinars and programmes were organised by the different Committees of the Institute, Regional Councils and Chapters of the Institute on the topics of professional relevance and importance like RERA Law in a NUTSHELL - Including Professional Opportunities for CMAs, New Sustainability Regulations, Infrastructure Financing, Financial Freedom Through Stock Market Investing, Product costing in SAP, Challenges in Costing & Audit in Construction & Engineering Industries, Recent changes in GST Laws, TDS under Income Tax Act, 1961, Crypto Currency & its future in India, Nuances of Valuation of Companies Due Diligence, Insolvency Profession, Power BI -Effective Usage in MIS, Inter Play of GST & BIC and so on. I am sure our members are immensely benefited from the deliberations in the sessions.

### DIRECTORATE OF CAT

#### ☉ Online Classes for CAT Students

CAT Directorate started the e- learning classes for the students pursuing CAT Course Part I from 17th October, 2022. The classes are taken by the expert resource persons. I congratulate CAT Directorate for its endeavours under the leadership of CMA H Padmanabhan, Chairman-CAT. I urge students to regularly attend the classes; these classes will help you in writing the CAT examination.

#### ☉ Implementation of CAT Course in other States and Universities

As informed in one of my previous communiques that the CAT Directorate bagged a prestigious project to impart CAT course in the state of Uttar Pradesh under a Memorandum of Understanding (MoU) with the Uttar Pradesh Skill Development Mission (UPSDM). I am glad to inform

you that the batches as per the MoU have started. The inaugural of the first batch took place on 14th October, 2022 at Sultanpur in presence of the CAT Directorate official and other representatives of the institute. I hope the other batches as per the MoU will start soon. I congratulate my Council colleague CMA H. Padmanabhan, Chairman of the Committee for Accounting Technicians that under his leadership this remarkable milestone has been achieved.

#### ☉ Updation of CAT Course in BFSI Sector Skill Council of India (BFSI SSC)

As you are aware that the Institute of Cost Accountants of India signed a Memorandum of Understanding (MOU) with the BFSI Sector Skill Council of India (BFSISSC) for alignment of CAT Course of the Institute with their Qualification Pack BSC/Q8101 -Accounts Executive Qualification under National Skills Qualifications Framework (NSQF). This alignment is necessary for running the CAT course under skill development projects. Now as per the communication received from the BFSI SSC, the said Account Executive BSC/Q8101 pack has been revised to Account Assistant BSC/Q8101 with upgradation in the course curriculum and course duration. The revised curriculum now has total training hours increased to 480 hours from 350 hours.

#### ☉ Submission of proposal to implementing CAT course in various states

To target the youth of the country and states under skill development schemes of the states, the CAT Directorate submitted the proposal to the following:

- i. CAT Proposal for SC, ST and OBC: The proposal has been submitted to Smt. Droupadi Murmu, Hon'ble President of India to implement CAT course for Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Classes of India. If the proposal gets the assent of Hon'ble President of India, it would be the game changer for the Institute and would also provide opportunities for the SC/ST and OBC who are deprived of quality education.
- ii. West Bengal: The proposal was submitted to Dr. Shashi Panja, Hon'ble Minister of Industry, Commerce and Enterprises & Public Enterprises & Industrial Reconstructions Women & Child Development & Social Welfare, Government of West Bengal on 14th October, 2022 during the CFO Meet organised by the Institute & PAIB Committee, South Asian Federation of Accountants (SAFA) at Kolkata.
- iii. Bihar: The proposal has been submitted to Shri Surendra Ram, Hon'ble Minister, Labour Resource department, Government of Bihar with a copy to Sri Arvind Kumar Chaudhary, IAS Principal Secretary,

Labour Resource department, Government of Bihar.

- iv. Karnataka: The proposal has been submitted to Shri Ashwin D Gowda, Managing Director, Skill Mission, Government of Karnataka.

⊙ **Additional Skilling/Training of Retiring defence personnel recruited by Indian Army, Indian Navy, and Indian Air Force by offering them Certificate in Accounting Technician (CAT) Course of the Institute**

I am glad to share with you that the initial proposal submitted by the Institute in the month of July, 2022 drew a positive response from the Ministry of Defence. The MoD through its Directorate of Training, Directorate General Resettlement (DGR), Department of Ex-Servicemen Welfare has been taking up the proposal submitted by the Institute. A Meeting with DGR was held again on 10th October, 2022 at CMA Bhawan, New Delhi. The DGR team was led by Major General Sharad Kapur YSM, SM, Director General alongwith other senior officials. During this meeting, the acceptance of the proposal has been conveyed by the DGR team to the Institute. However, the proposal had to be updated in view of the recent updates received from the BFSI sector council mentioned in the above paragraph and the revised proposal has been submitted at the office of the DGR.

### DIRECTORATE OF STUDIES

⊙ **Mega Career Awareness Programme in association with University of Calcutta**

I am pleased to inform you that the Directorate of Studies in association with the Department of Commerce of University of Calcutta organized the 6th Edition of Mega Career Awareness Programme on the theme “Commerce Education & Beyond: Reinforcing Young Minds” on 7th November 2022 at Mahajati Sadan Auditorium, Kolkata. Around 1000 students and faculty members from 50 Colleges under University of Calcutta joined the programme with great enthusiasm.

Prof. Asis Kumar Chattopadhyay, Hon'ble Vice Chancellor of University of Calcutta was the Chief Guest of this mega event. I shared the dais with my council colleagues CMA (Dr.) Balwinder Singh, CMA Biswarup Basu and CMA Chittaranjan Chattopadhyay. Other esteemed dignitaries CMA Amal K Das, Former President of the Institute, CMA Amitabha Sinha, Director Finance, Jute Corporation of India, Professor (Dr.) Jadab Krishna Das, Dean, Faculty Council of Post Graduate Studies in Commerce, University of Calcutta, Dr. Suborno Bose, Chairman & CEO, IIHM & Indismart Group Worldwide & CEO, International Hospitality Council, London, Professor (Dr.) Siddhartha Sankar Saha, HOD, Dept. of Commerce, University of Calcutta also shared the dais. Esteemed

personalities from the industry and profession addressed and motivated the young generation with their visionary talk and deliberated on future direction to shape their career path.

### MEMBERS IN INDUSTRY & PLACEMENT COMMITTEE

⊙ **Campus Placement Initiative**

It is my pleasure to inform that the first phase of campus placement drive for qualified Cost Accountants of June 2022 term has been started very successfully at Delhi on 3-4 November 2022. Around 60 qualified CMAs have been placed in various reputed companies, viz. Power Finance Corporation Ltd., Prism Johnson Ltd., Reliance JIO, Vedanta, BNY Mellon, ITC - Agri Business Division, ITC - Foods Division, Kalpataru Power Transmission Ltd., RSM, Express Roadways Pvt. Ltd. etc. Highest package of Rs.28 lakh p.a. was offered by PFC which is the highest for any CMA Campus Placement drives so far.

I along with CMA Sankar P Panicker, Chairman- SIRC, CMA Vijay Kiran Agastya, Secretary-SIRC, CMA Rakesh Shankar Ravisankar – Member, IAASB participated in the Valedictory Session of 12 days Pre-campus Programme organised by the Members in Industry and Placement Committee on 22nd October, 2022 at SIRC - Chennai. I highlighted the importance of upskilling with industry required skill sets and interacted with the prospective candidates on the various professional development opportunities and abroad. The interaction with the students, parents and the special invitees lasted for about an hour and they expressed their fullest satisfaction on the placement initiatives.

I heartily congratulate CMA Debasish Mitra, Chairman - Members in Industry & Placement Committee and the entire placement team for their relentless hard work to make this campus placement drive successful. I wish every success of the forthcoming campus placement drives.

### PROFESSIONAL DEVELOPMENT COMMITTEE

I am delighted to share that the Professional Development Committee of the Institute in association with Pune chapter has organized the National CMA Practitioners Convention (NCPC) 2022 on 7th & 8th October at Pune, Maharashtra. I would like to congratulate the Chairman-NCPC for the grand success of the Convention with active participation of Industrial leaders, eminent speakers and delegates from profession, industry, regulators and government. It was a great opportunity for the budding professionals to understand about the world of the Practicing CMAs as the main emphasis was laid on the Professional Opportunities available for CMAs in Conventional & Non-Conventional Areas. The success stories shared by the young professionals were very much inspirational for

our new practitioners and will prove to be the booster in upgrading their professional acumen.

PD Directorate submitted representations to various organizations for inclusion of cost accountants for providing professional services.

Please visit the PD Portal for Tenders/EOIs during the month of October 2022, where services of the Cost Accountants are required in Webel Technology Limited (WTL), Certification Engineers International Limited (CEIL), U.P. Power Transmission Corporation Limited, Aarogyasri HealthCare Trust Telangana, Indian Overseas Bank, Punjab National Bank, Indian Oil Corporation Limited, Rajasthan State Mines & Minerals Limited, District Health & Family Welfare Society (DH&FWS), Faridabad, Jharkhand State Beverages Corporation Limited, Noida Special Economic Zone Authority, Jharkhand Urja Sancharan Nigam Limited (JUSNL), District Health & Family Welfare Society(DH&FWS), Rohtak, Kerala State Road Transport Corporation, Punjab National Bank Bhopal, Armoured Vehicles Nigam Limited, Indian Medicines Pharmaceutical Corporation Limited, etc.,

Further, Professional Development Committee in association with Hyderabad Chapter organised programme on “Nuances of Valuation of Companies Due Diligence, Insolvency Profession, Power BI -Effective Usage in MIS, Inter Play of GST & BIC”.

### TAX RESEARCH DEPARTMENT

I am happy to inform that the Tax Research Department has launched its grand 5th Anniversary Edition of the Tax Bulletin during October 2022. GST course for colleges and universities commenced at Bemina College, Kashmir (2nd Batch) and at The New College, Chennai. Classes are being conducted on offline mode in both the locations. The classes for all the seven Taxation Courses are being conducted. The Tax Research Department has started a Quiz Contest for members. Every Friday QUIZ contest is being conducted from 5 p.m. onwards.

On 16<sup>th</sup> October, the examinations for the previous batches of all the taxation courses were held successfully. I wish the students who have passed the exam all the luck in their future endeavors.

### TECHNICAL DIRECTORATE

#### ⦿ Amendment to the Guidelines for Compliance by the Members of the Institute

I am pleased to inform that the Council of the Institute in its 337<sup>th</sup> Meeting decided to amend the Guidelines for Compliance by the Members of the Institute on responding to any Tender, which were issued on 19<sup>th</sup> April 2017. As per the notification issued by the Institute if any member of the Institute in practice quotes any amount less than the minimum fee of the assignment as prescribed in the tender

document, he shall be liable to disciplinary proceedings under section 21 & 22 for violation of Clause (1) of Part II of the Second Schedule of the CWA Act, 1959. The notification is available at [https://icmai.in/upload/Institute/Notifications/Council\\_2810\\_22\\_Amendment.pdf](https://icmai.in/upload/Institute/Notifications/Council_2810_22_Amendment.pdf)

#### ⦿ Format of communication to the previous Cost Auditor

I wish to inform the members that the Council of the Institute in the 337<sup>th</sup> Meeting has prescribed a format of communication by a Cost Accountant in Practice in case he accepts a position as a Cost Accountant previously held by another Cost Accountant in Practice. As per the notification issued by the Institute the non-compliance of this by a member in practice shall be liable to disciplinary proceedings as per clause (8) of Part I of the First Schedule to The Cost and Works Accountants Act, 1959. This notification is available at [https://icmai.in/upload/Institute/Notifications/Council\\_2810\\_22\\_Format.pdf](https://icmai.in/upload/Institute/Notifications/Council_2810_22_Format.pdf)

### ICMAI REGISTERED VALUERS ORGANISATION (RVO)

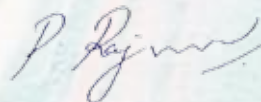
I am pleased to inform that ICMAI RVO has successfully organized 50 hrs program of 27<sup>th</sup> Online Batch Securities or Financial Assets from 20<sup>th</sup> October to 30<sup>th</sup> October 2022, 19<sup>th</sup> Online Batch Land and Building from 28<sup>th</sup> October to 6<sup>th</sup> November 2022.

ICMAI RVO also conducted Professional Development Programs such as Master Class on Valuation, Building Valuation Practice, Tool Kit for Registered Valuers, Completion of 5 years of Regulated Valuation Profession, Byte Size Certificate Courses in Valuation, Master Class on Valuation. Mastering Valuation Techniques during October 2022. For various publications and monthly e-Journal of ICMAI RVO, please visit: <https://www.rvoicmai.in/publication/>

I wish prosperity and happiness to members, students and their families on the occasion of Guru Nanak's Birthday and pray for the success in all of their endeavors.

Stay safe and healthy!

With warm regards,



CMA P. Raju Iyer

November 7, 2022



**CELEBRATION OF**  
**“THE WORLD INVESTOR WEEK (WIW) 2022”**  
**BY THE**  
**BANKING, FINANCIAL SERVICES AND INSURANCE BOARD OF**  
**THE INSTITUTE**

**1<sup>st</sup> Webinar:**

**‘What’s Your Financial Game plan’**  
held on 13<sup>th</sup> October 2022

*Speaker: CMA Malhar Majumdar, Wealth Management  
Consultant*

**T**he World Investor Week (WIW) 2022 is a global campaign which is being celebrated under the aegis of IOSCO and SEBI, from October 10th to 16th, 2022, to raise awareness about the importance of investor education and protection. The Banking, Financial Services and Insurance Board of The Institute of Cost Accountants of India in its objective of knowledge dissemination had conducted the World Investor Week (WIW) between 10th and 16th October 2022 to benefit all stakeholders for spreading the message of proper investor education. The first webinar ‘What’s Your Financial Game plan’ took place on 13th October 2022 with the Chief Guest and Speaker CMA Malhar Mujumdar, Wealth Management Consultant. CMA Chittaranjan Chattopadhyay, Chairman, BFSIB of ICAI addressed the august presence and said that India is celebrating “Azadi Ka Amrit Mahotsav” to mark the 75th year of independence with great fanfare and enthusiasm. The Indian securities markets have seen a phenomenal transformation and have channelized savings to assist economic growth. He expressed his hope that the program would help to enlighten many facets of investment management. The speaker emphasized that an individual has to delineate his/her portfolio for maximizing returns and minimizing risk to make sure he has the capability of working in isolation or in a team. He urged the necessity of subscribing for liability protection. The speaker deliberated the safe, flexible options such as Savings account, Fixed Deposits, Provident Fund and Pension Funds, National Pension Scheme and Annuities. He furthermore discussed the market related, whether it be equity, bonds or Portfolio Management Services. He pointed out that these products contain market risk that can go up or come down with the tide of the economic graph. The entire portfolio will not grow in line with inflation. The Speaker highlighted the goals determination such Retirement, higher education, marriage of children, investment in house, car, international vacation, taking up entrepreneurship and philanthropy. The Speaker enumerated various lucid and elaborate practical examples with an analogy of a football team. There was active participation from the members who clarified the doubts. There were Q & A session and the

speaker elaborately discussed in details of the Questions raised by the attendees.



*CMA Malhar Majumdar, Wealth Management  
Consultant deliberating in the webinar on “What’s  
Your Financial Gameplan” organised by the Banking,  
Financial Services and Insurance Board on  
13<sup>th</sup> October 2022*

**2<sup>nd</sup> Webinar:**

**India Equity View Amidst Global Turmoil’**  
held on 15<sup>th</sup> October, 2022

*Speaker: CMA Dhiraj Sachdev, Managing Partner &  
CIO, Roha Asset Managers’ LLP*

**T**he second webinar ‘India Equity View Amidst Global Turmoil’ took place on 15th October 2022 from 4-6 pm with the Chief Guest and Speaker being CMA Dhiraj Sachdev, Managing Partner & CIO, Roha Asset Managers’ LLP. The learned Speaker started the Webinar with a contemporary gist of the world economic and geo-political purview. At the outset he discussed about volatility and how volatile the world market has been during the various debacles and how the market corrected itself afterwards. He said that volatility should be treated as an opportunity and not as a risk. The risk is basically the perceived risk on stock markets on a daily basis. The historical perspective one should not be deterred away from investing into equities and historically it has been proved whenever the markets have been volatile it has been an investment opportunity for investors, the example is the bubble bursting in 2002. CMA Sachdev also cited many real life examples to

**Basic Mathematics for Financial Planning**held on 16<sup>th</sup> October, 2022*Speaker: Shri Dibyendu Mukherjee,  
Finance Professional*

explain the volatile world market and how India stands out clearly among its contemporaries. The reasons for such outperform being the domestic growth, broad based earnings recovery, robust consumption demand, peaking out inflation, strong gross collection of direct taxes, uptick of loans in banks and upward corporate capex outlook. The Speaker suggested lucrative opportunities for investment in India. The first one he pointed out is the manufacturing companies as he had witnessed a substantial shift from unorganized to organized sector green energy lead growth and a lot of these capital goods companies will be driven by focus on the manufacturing cycle in India. The other lucrative sectors analysed by the speaker being – Banks and NBFCs, Real estate, speciality chemical, cement, IT or technology. He also shed some light on the areas to be avoided and the reasons for such avoidance for investing. The areas being metals industry, pharmaceutical industry, the new age digital companies. CMA Sachdev laid stress on ESG and explained how the market is bullish on the ESG and corporate governance issues. He said that the coming 4 to 5 years would be beneficial in investing in India due to Government's focus on financial reforms. The Speaker concluded that macro and global concerns only act as a distraction. Any investor should be focused to own individual companies on their respective business merit and not succumb to such a fearful noisy environment which can make them moribund. He furthermore reiterated to focus on long term investing and it's a blessing in disguise that we are currently passing through weak sentiments, largely driven by global issues, which means that prospective returns in Indian markets are going to be much better. The ultimate strategy should be to stay invested in good Indian businesses and ride the global storm. The Golden Rule in the market when the perceived risk is high the real risk is actually low and vice versa. There were Q &A session and the speaker eloquently deliberated the issues in details of the Questions raised by the attendees.



*CMA Dhiraj Sachdev, Managing Partner & CIO, Roha Asset Managers' LLP deliberating in the webinar on "India Equity View Amidst Global Turmoil" organised by the Banking, Financial Services and Insurance Board on 15<sup>th</sup> October 2022*

The 3<sup>rd</sup> webinar 'Basic Mathematics for Financial Planning' took place on 16th October 2022 with the Chief Guest and Speaker being Shri Dibyendu Mukherjee, Finance Professional.

Shri Dibyendu Mukherjee described in detail about every angle of basic mathematics for investments and how it helps in our day to day financial planning. He stated future value of various permutations and combinations through excel formula, He explained how to calculate the future value with monthly and quarterly compounding interest rates. He also stated the future value of investment in Systematic Investment Plan of Mutual Fund. He touched upon the concept of time value of money and impact of opportunity cost while taking into consideration factors like inflation and purchasing power. Shri Mukherjee introduced and explained nominal and effective interest rates and how to derive effective interest rates from nominal rates with real life examples. He gave an in-depth knowledge of PMT function and its applications. He delved on the various concepts of Annuity, CAGR, XIRR and their usage and limitations. He enumerated various lucid and elaborate practical examples to elaborate his discussion. There was active participation from the members who clarified their doubts.



*Shri Dibyendu Mukherjee, Finance Professional deliberating in the webinar on "Basic Mathematics For Financial Planning" organised by the Banking, Financial Services and Insurance Board on 16<sup>th</sup> October 2022*



## CAPITAL MARKET SYMPOSIUM

**Topic: “Financial Freedom Through Stock Market Investing”**  
**Date: 28<sup>th</sup> October 2022 at Hotel Hindustan International from 6 to 8.30 pm**

The Banking, Financial Services and Insurance Board of the Institute of Cost Accountants of India, under the leadership of CMA Chittaranjan Chattopadhyay, Chairman BFSIB organized a Capital Market Symposium on the topic of “Financial Freedom Through Stock Market Investing” on 28<sup>th</sup> October 2022 at Hotel Hindustan International, Kolkata from 6 to 8.30 pm. The event which was in physical mode was also live-streamed on the official YouTube channel of the Institute and saw large and active participation from members and students of the Institute.

CMA Basant Maheshwari, eminent Portfolio Manager and CMA (Dr.) Sunder Ram Korivi, Academic Head, HSNL University & Adjunct Faculty of IICA, MCA graced the program in a fireside chat and left the audience enthralled with their command and proficiency over contemporary issues of the Indian capital market.

CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board, welcomed all the guests warmly and made the opening remarks. He pointed out that Indian capital markets are at par with its counterparts in many of the advanced economies in terms of efficiency, tradability, resilience and stability. He also touched upon the viable economic development of a Nation-State which also depends upon the capital markets. He appraised the participants of the various activities of the BFSIB with special emphasis on conducting various activities to equip and enhance skills of the stakeholders and members for the sole purpose of inclusive and holistic growth.

CMA Biswarup Basu, Immediate Past President, in his special address thanked the Chairman of the BFSI Board and highlighted key accomplishments of the Institute.

During the fireside chat between CMA Basant Maheshwari (the speaker) and CMA (Dr.) Sunder Ram Korivi (the moderator), the speaker when being asked that how optimistic/pessimistic one should be about investing in India, the Speaker advised the audience that one has to dream for a better tomorrow and incorporate proper skill sets and passion into imbuing the intricate art of investment for optimized returns. It is imperative for an investor not to get caught up in the quagmire of negativity. He stated that in purview of all the Central Banks increasing rates, the Indian stock market will bottom out before the final hike is done. In spite of the China plus one strategy, economies will not simply not shift overnight and abandon the scale of their operations, notwithstanding China plus one strategy.

He also said that for retail the drawdown in March 2020 has been a blessing in disguise when the Nifty took a nosedive hit and retail investors started investing in an unforeseen scale from which they have got a taste of the markets.

The moderator asked about the Fed decision and RBI’s take on it. CMA Maheshwari answered that the RBI has no other option but to follow the Fed otherwise it risks the rupee moving in a direction averse to the dollar. The Speaker felt that both the top-down and bottom-up approaches are equivalent and require analysis in various perspectives. However, if one buys online broking stocks as retailer operate mostly on online brokerages and then to zero down but broadly the balance would shift to bottoms up whenever one looks at an individual company but without a sectoral tailwind nothing gets blown in the equity market, which is a top-down approach.

CMA Maheshwari stated that the logic of buying a stock is primarily based on its Balance Sheet. He iterated that there are 90% of the efforts that goes behind buying the stock. The rest 10 to 15% of the decision-making is usually made by informal communication. It has to be remembered that every single stock has some sort of baggage. The speaker stressed that the objective of an investor will define the allocation but an individual cannot think of achieving financial freedom through stock market investing having a 40% equity allocation.

CMA Maheshwari mentioned that the Nifty in its current format is a very good underlying on its own. The struggle to figure out which Mutual Fund to invest in diminishes if one invests in Nifty, as the index is very difficult to beat. He stressed the virtues of passive investing if an investor is ready to have moderate returns.

Both the speaker and moderator praised the CMA curriculum and stated that it has enriched their comprehension of marginal costing and its real-world application in stock selection.

The fireside chat was deeply appreciated by the members of the Institute who clarified their doubts regarding certain industries of the Indian capital markets and macro-economics in general, both in the online mode as well as physically.

There were numerous questions both from the audience and also from an online forum and were impeccably answered by the speakers. The event was attended and appreciated by a large number of participants which also included dignitaries like CMA Amal Kumar Das, Past President and CMA Harijiban Banerjee, Past President.





Lighting of the Lamp: CMA Avijit Goswami, former Central Council Member, CMA Amal Kumar Das, Past President, CMA Biswarup Basu, Immediate Past President, CMA (Dr.) Sunder Ram Korivi, Academic Head, HSNC University & Adjunct Faculty of IICA, MCA, CMA Basant Maheshwari, Portfolio Manager and CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board (L to R)

CMA (Dr.) Sunder Ram Korivi, Academic Head, HSNC University & Adjunct Faculty of IICA, MCA being felicitated with a plant by CMA Biswarup Basu, Immediate Past President, (L to R) with CMA Basant Maheshwari, Portfolio Manager on the dais (centre)



CMA Basant Maheshwari, Portfolio Manager, being presented with a plant by CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board (L to R)

CMA (Dr.) Sunder Ram Korivi, Academic Head, HSNC University & Adjunct Faculty of IICA, MCA having a thought provoking fireside chat with CMA Basant Maheshwari, Portfolio Manager (L to R)





6<sup>th</sup> Edition  
**MEGA CAREER AWARENESS PROGRAMME**  
Commerce Education & Beyond: Reinforcing Young Minds



7<sup>th</sup> November 2022 at Mahajati Sadan, Kolkata

Organized by

Directorate of Studies, The Institute of Cost Accountants of India

In association with

Department of Commerce, University of Calcutta



An Initiative of Information Technology Directorate



# Introduction to ICAI-CMA Chat

## for sending notifications to Students/Members

The Institute has launched **ICAI-CMA Chat** Platform for sending notifications to its stakeholders



### ICAI-CMA Chat on Jio Platform

Dear Students & Members,  
The Institute is introducing **ICAI-CMA Chat on Jio Platform**, which is an instant messaging application with voice and video calling capability. It offers rich communication features for an enhanced experience. You can access this application through any internet enabled smartphone (currently **iPhone / Android** only) over any data network.

Unique link to ICAI-CMA channel on JIO Chat is as follows:  
<https://jiochat.com/channel/600000001186/1>



**CMA P. Raju Iyer**  
President



**CMA Vijender Sharma**  
Vice President



**CMA Ashwin G. Dalwadi**  
Chairman  
Information Technology  
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Please note that, from **01<sup>st</sup> January 2023** onwards notifications to Students/Members will be sent through **ICAI-CMA Chat on Jio Platform** Only



## THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

[www.icmai.in](http://www.icmai.in)

### Headquarters:

CMA Bhawan, 12 Sudder Street, Kolkata - 700016

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CMA Bhawan, 3 Institutional Area, Lodhi Road, New Delhi - 110003

Behind every successful business decision, there is always a **CMA**

# CMA Syllabus 2022

## CMA Course Structure

### FOUNDATION COURSE

[TOTAL MARKS: 400]

- PAPER 1: FUNDAMENTALS OF BUSINESS LAWS AND BUSINESS COMMUNICATION (FBLC)**  
**PAPER 2: FUNDAMENTALS OF FINANCIAL AND COST ACCOUNTING (FFCA)**  
**PAPER 3: FUNDAMENTALS OF BUSINESS MATHEMATICS AND STATISTICS (FBMS)**  
**PAPER 4: FUNDAMENTALS OF BUSINESS ECONOMICS AND MANAGEMENT (FBEM)**

### INTERMEDIATE COURSE

[TOTAL MARKS: 800]

#### GROUP-I

- PAPER 5: BUSINESS LAWS AND ETHICS (BLE)**  
**PAPER 6: FINANCIAL ACCOUNTING (FA)**  
**PAPER 7: DIRECT AND INDIRECT TAXATION (DITX)**  
**PAPER 8: COST ACCOUNTING (CA)**

#### GROUP-II

- PAPER 9: OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT (OMSM)**  
**PAPER 10: CORPORATE ACCOUNTING AND AUDITING (CAA)**  
**PAPER 11: FINANCIAL MANAGEMENT AND BUSINESS DATA ANALYTICS (FMDA)**  
**PAPER 12: MANAGEMENT ACCOUNTING (MA)**

### FINAL COURSE

[TOTAL MARKS: 800]

#### GROUP-III

- PAPER 13: CORPORATE AND ECONOMIC LAWS (CEL)**  
**PAPER 14: STRATEGIC FINANCIAL MANAGEMENT (SFM)**  
**PAPER 15: DIRECT TAX LAWS AND INTERNATIONAL TAXATION (DIT)**  
**PAPER 16: STRATEGIC COST MANAGEMENT (SCM)**

#### GROUP-IV

- PAPER 17: COST AND MANAGEMENT AUDIT (CMAD)**  
**PAPER 18: CORPORATE FINANCIAL REPORTING (CFR)**  
**PAPER 19: INDIRECT TAX LAWS AND PRACTICE (ITLP)**

### ELECTIVES

- PAPER 20A: STRATEGIC PERFORMANCE MANAGEMENT AND BUSINESS VALUATION (SPMBV)**  
**PAPER 20B: RISK MANAGEMENT IN BANKING AND INSURANCE (RMBI)**  
**PAPER 20C: ENTREPRENEURSHIP AND START UP (ENTS)**

*Note: Students will be required to select any one of three Elective Papers (20A/20B/20C) at the time of enrolment for the Final Course*

- ⊙ CMA Syllabus - 2022 shall be effective from June 2023 term of examinations and onwards
- ⊙ Students taking enrollments in the Final Course have to give one time option about choice of "Elective Paper"
- ⊙ Syllabus 2016 shall be continued till December 2023 Exam term
- ⊙ Old students seeking conversion into Syllabus 2022 shall be given one time option to be exercised at least 6 months prior to the examination for necessary verification and approval
- ⊙ Once their request for conversion is accepted, old students have to purchase necessary Study Materials under Syllabus 2022 at prescribed prices



# SRI RAMACHANDRA

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Category - I Deemed to be University) Porur, Chennai

## Sri Ramachandra Faculty of Management Sciences

In Collaboration with



The Institute of Cost Accountants of India  
(Statutory body under an Act of Parliament)

# CERTIFICATE COURSE IN HEALTHCARE FINANCE

### Objectives

To enable Finance Professionals, Healthcare Administrators, Medical Practitioners and Consultants appreciate and understand:

- > Role of Finance & Accounting in a Hospital
- > Importance of Budgeting, Internal Control in Finance
- > Compliance & Statutory Requirements related to Finance
- > Importance of MIS Reporting
- > Marching Towards Quality Initiatives

### Target Audience

- > Hospital Administrators
- > Medical Practitioners and Consultants
- > CMA members & students
- > Finance Professionals (CA, CS, CFA, MBAs)
- > Students pursuing UG/PG aspiring to enter into Healthcare Finance

### Methodology

- > Class room lectures (blended) followed by simple exercises to understand the application of the concepts.

### Duration of the Course

- > 50 Hours

### Mode of Delivery

- > Classroom Lectures/Online

### Eligibility

- > Any degree with a minimum of 50 percent marks
- > UG/PG students pursuing their final semester

### 4 modules

Module 1: Introduction to Healthcare and Hospital management  
Module 2: Role and functions of Finance department  
Module 3: Management and Internal control in Finance Function  
Module 4: Budgeting and reporting in Healthcare

Rs 7500/-+ applicable GST of 18%=Rs 8850/- for course registration  
Rs1000/-+applicable GST of 18 % = Rs 1180/- for examination



Google form link : <https://bit.ly/3rODFc0>

### Contact us

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Phone no : 97910 43382

Website: [www.srfms.sriramachandra.edu.in](http://www.srfms.sriramachandra.edu.in)



Ms Madhabi Puri Buch, Chairperson, Securities and Exchange Board of India ( SEBI) being felicitated on 1 st November, 2022 at Mumbai by CMA P.Raju Iyer, President, ICAI with CMA Chittaranjan Chattopadhyay, Chairman, Banking, Financial Services and Insurance Board ( BFSIB), CMA Dr. Ashish P.Thatte, Chairman, Corporate Laws Committee and CMA Vijender Sharma, Vice President, ICAI ( L to R)



Corporate Laws Committee in association with Southern India Regional Council & Cochin Chapter of the Institute of Cost Accountants of India & Kochi Chapter of SIRC of the ICSI organised one day Seminar on “Powering towards inclusive and sustainable growth- Role of Professionals” at Kochi on 22nd October 2022



CMA Asim Kumar Mukhopadhyay, CEO & Managing Director of TML Smart City Mobility Solution Ltd. greeted by CMA Chittaranjan Chattopadhyay, Chairman, BFSIB of the Institute

# ADVANCING DEVELOPMENTS IN THE TELECOM INDUSTRY



**CMA Swamy Nunna**  
Chief Financial Officer  
RMB Holding Group  
Dubai  
[nunnaswamy@gmail.com](mailto:nunnaswamy@gmail.com)

## Abstract

*Ever since the pandemic has hit us all around the world, Industries focused on providing support to customers as well as a business via digital transformation. As the spectrum now taking place in India it is expected that in no time India shall join the ranks with 5G telecom networks. Some of the latest and emerging technologies trends in the telecom industry include 5G- THE NEXT BIG NETWORK, RPA, RAN, Cloud Computing, WIFI 6, Metaverse, and Optimization of the cost.*

With the passing of every day companies working for telecom are facing lots of changes. We have seen divisions in business and customer models concerning technologies such as AI, big data as well as other service-delivery and value capture models. Ever since the Covid pandemic has hit us all around the world, they focused on providing support to customers as well as a business via digital transformation. With the spectrum now taking place in India it is expected that in no time India shall join ranks with 5G telecom networks. As per a report, the 5G users can touch the figure of 100 million in the year 2023 and as per an international online survey done on 193 telecommunication stakeholders, around, two thirds believe that 5G would turn out to be one of the most dramatic transformations in telecommunication and it would solve the customer-related problems significantly.

The standard 5G for the cellular network has not only been ahead of its experience regarding communication but it has also reduced the latency which has enhanced the coverage and that in return has helped AI, AR/VR, edge computing, etc. to emerge as better technologies. With the new trends coming now and then, telecom companies must reinvent themselves so that they stay true to the segment and not face too much of competition from their rival telecom companies.

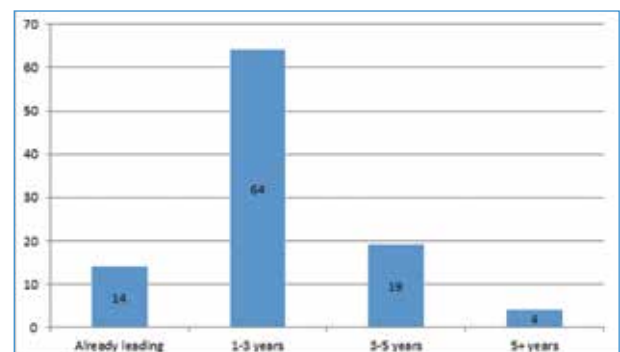
Now let's check some of the latest and emerging technology trends in the telecom industry:

### 5G - THE NEXT BIG NETWORK

As per statistics, there are around 5 billion internet users all around the globe. The 5G technology is for sure, the next big thing for telecommunication and devices. It gives better speed than any of the previous mobile networks. 5G provides some massive machine-type communication which enables the creation of some high-density IoT (internet of things)

networks. Some 5G widespread applications help in making 5G one of the most important upcoming technologies. Aarna Network, a US-based start-up, helps in providing a multi-cluster orchestration platform namely AMCOP. AMCOP automatically manages not just cloud infrastructure but also connected networks for being edge networks, AMCOP which supports 5G radio access network otherwise known as RAN, 5G core (5GC) orchestration, network slicing and data analytics. AMCOP is built on a vendor-agnostic open-source application that helps in business optimization of their expenses on network infrastructure and increases security. On the other hand, Simnovus which is an Indian start-up helps in building an efficient UE simulator for 5G networks. This start-up helps in transforming the traditional x86 hardware into a UE simulator.

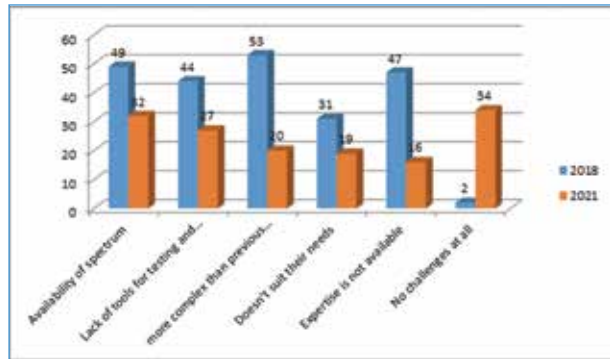
There is little discrepancy among the respondents as to how long it takes for 5G to lead the world. The graph below renders a little clarity



(Data in percentage)

5G is not that smooth, it also comes with a lot of hurdles. These might have reduced as compared to previous generations, but some still sustain. Have a look at the following graph to

get an idea about it.



(Data in percentage)

**ROBOTIC PROCESS AUTOMATION (RPA)- AI BUT DIFFERENT**

RPA is not AI, but it is the fundamental of AI as we know it. Telecom deals with great volumes of operational processes that include management of data and new services development etc. RPA helps in improving data communication as well as transmission while it also has much higher levels of security of data. This helps in reducing the rates of error and improves customer service. RPA is auto generated and it can also analyse the reports in terms that help in deciding whether the stakeholders’ report is relevant or not.

**RADIO ACCESS NETWORK (RAN)- THE HEART OF THE TELECOM SYSTEM**

If you are able to link your devices to other parts of the network, it is through RAN. It connects the equipment through a fibre line or even wireless. It has evolved over time, right from the first generation to the fifth generation. As per the aforementioned online survey, more than 50 per cent of the respondents are pretty serious about considering an Open RAN strategy due to various reasons. More than 80 per cent believe that Open RAN would diminish CAPEX and OPEX significantly and it includes all those companies which already have an Open RAN strategy. Even more than 60 per cent of the respondents can accept a higher incidence rate owing to its financial and operational benefits. Different companies are at different levels of considering Open RAN and the following graph would help one to get an idea of it.



(Data in percentage)

**Metaverse is a world created virtually by combining various technologies that include virtual and augmented reality**

**CLOUD COMPUTING- WHERE EVERYTHING IS SECURE AND A TOUCH AWAY**

Cloud computing is one of the fastest-growing technology trends within the telecommunications industry. With the wide movement, IoT devices and its use has become much more sophisticated along with their high demand for powering the computer. As we have an idea of migrating data, applications as well as other business elements to a cloud computing environment, cloud backend lends a helping hand in providing a platform for subscription, data policies, and resource budget allocation that uses web-based dashboards. Blockchain is currently a sound base for the future of the internet, and it is expected to grow globally at a compounded annual growth rate of 77.9 per cent between 2022 and 2030.

**WI-FI 6- THE ALTERNATE VERSION OF 5G**

Wi-fi also known as wireless fidelity had long back introduced the standard that is known as 802.11 ax whose commercial name is Wi-Fi 6. This wi-fi type holds an upper advantage as it has a greater capacity that can help serve devices, lower energy consumption and a higher speed that serves in obtaining information. In a simpler tone, you would be capable of serving up to 400 devices at the same time. How 5G is just like that Wi-Fi 6 has the same practical application it works on, be it entertainment, reality, or virtual. It is useful in other industries as well like medicine, telemedicine, teleworking, IoT, etc.

**METAVVERSE- MEET THE WORLD AND STILL BE DISTANCED**

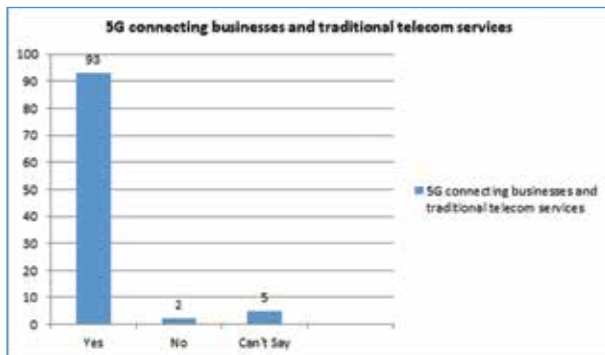
Metaverse has gained popularity ever since it has been announced to the public. Metaverse is a world created virtually by combining various technologies that include virtual and augmented reality. Facebook, the first platform, hoped that it would allow people to go meet others, play, work, study as well as shop. It does not exist as of now; however, the concept has been a hit. It is said that the metaverse will be the next big sensation in technology as it would blur the difference between the reality of physical and digital life. You could buy from real money goods and services in a game. Some big jobs in the metaverse would include metaverse research analyst and personalized avatar creator.

**OPTIMIZATION OF COST- BETTER OUTLOOK, BETTER PROFIT**

In the telecommunication industry which is highly



competitive with each passing day finding new methods for reduction of costs keeps on increasing. With the increase in margins and prices, most of the telecommunication industries are forced to face losses in their profit. As a helping hand intelligent automation, virtualization, NFV, as well as cloud computing there is a small cost reduction which can be achieved. Not just the cost but most of the respondents also agree with the fact that 5G would bridge the gap between web service companies and traditional telecommunication service providers and it is clear from the following graphical depiction. -



(Data in percentage)

### SUMMARIZATION OF THE TRENDS

With the new approaches coming into the market readily telecom companies should make sure that they are well informed about the latest trends and processes that would help them in taking a big leap in the digital transformation wave. 5G and other innovative implementation, flexible networks not just for high but low latency requirements impact telecom companies in one way or the other. With the technologies advancing at rapid speed and with the introduction of 5G, AI, etc., the telecom companies would soon see the difference made by these transformations. To remain ahead Telecom companies should ensure that they are well informed about the new opportunities and emerging technologies. **MA**

### Reference Links

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2. *5G Survey Report by SIS International Research*
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4. <https://www.telenity.com/cost-optimization-in-the-telecom/>
5. <https://www.ibef.org/industry/telecommunications>
6. [https://www.ey.com/en\\_in/technology/ey-tech-trends-chapter-two-how-are-indian-telecom-companies-donning-a-5g-skin](https://www.ey.com/en_in/technology/ey-tech-trends-chapter-two-how-are-indian-telecom-companies-donning-a-5g-skin)



### AT THE HELM

Our heartiest congratulations to CMA Ajit Kumar Behura, Member of the Institute for being elevated to the post of Director (Finance), Mahanadi Coalfields Limited (a subsidiary of Coal India Limited) from 1st August 2022. Shri Behura started his career at NHPC (1993-1996). He is a seasoned finance professional with over 25 years of experience in coal industry at various capacities, both at area and corporate level of MCL and CIL. His expertise and exposure extends into many domains – Costing and budgeting, treasury management, corporate accounts, project finance, MDO contracts (finalization of 2 major contracts – Subhadra OCP and Siarmal OCP), innovation and automation of financial process etc. He was a key facilitator and played a major role in roll-out of SAP-ERP in MCL w.e.f. 01.04.2021. He is a subject matter expert (SME) and specific point of contact (SPOC) for SAP-FICO module.

His vision and strategy for growth of the Company includes loss reduction in UG mines, debtor realization, undertaking and accelerating FMC and diversification projects, capex growth, compliance management etc.

He received the 'Best Executive with Innovative Ideas' Award in 2017-18 for formulation and implementation of *E-capital fund management system* in Project Cost Monitoring.

We wish CMA Ajit Kumar Behura, the very best for all his future endeavours.

# EMERGING TRENDS IN INDIAN TELECOM INDUSTRY: A STUDY

## Abstract

The telecommunication industry in India is rapidly growing and witnessing many developments. India is moving towards accomplishing a \$ 1 trillion economy by the end of 2025. By 2025, the telecom sector will emerge as top five employment opportunity generator in the country. This article traces the evolution of Indian telecom infrastructure during the past few years and also discusses the industry readiness of India for 5G, alongwith network expansion, investment, recent developments in the sector and highlights the Government initiatives.



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## INTRODUCTION

The telecommunication industry in India has witnessed many developments and undergone massive changes. It is one of the fastest growing industries in the world. India has developed as the second largest telecommunication market with a subscriber base of 1.17 billion. India had an overall tele- density of 82.11 per cent by the end of July 2022. The telecom sector in India is the third largest sector in terms of foreign direct investment (FDI).

### TELECOM SUBSCRIPTION DATA

Particulars	Wireless	Wireline	Total
			Figures in million July 2022
Urban Telephone Subscribers	626.74	23.66	650.40
Monthly Growth Rate	0.20%	0.25%	0.20%
Rural Telephone Subscribers	521.29	1.97	523.26
Monthly Growth Rate	-0.12%	0.11%	-0.12%
Total Telephone Subscribers	1148.03	25.63	1173.66
Monthly Growth Rate	0.06%	0.24%	0.06%
Share of urban Subscribers	54.59%	92.31%	55.42%
Share of rural Subscribers	45.41%	7.69%	44.58%
Broadband Subscribers	777.95	29.47	807.42
Rural Tele -Density (%)	58.15%	0.22%	58.37%

Urban Tele - Density (%)	129.88%	4.90%	134.78%
Overall Tele- Density (%)	83.25%	1.86%	85.11%
Source: TRAI			

### INDUSTRY OVERVIEW :

Telecommunications in India began with the introduction of the telegraphy. In July 1991, with the announcement of the New Economic Policy, the telecom sector was opened for private investments. In 1994, the announcement of the national Telecom Policy further stimulated the growth of the industry. With the creation of Telecom Regulatory Authority of India (TRAI) in 1997 BSNL was carved out of Department of Telecommunications for separate functions and telecom operations.

For dispute settlement an appellate body called Telecom Disputes Settlement and Appellate Tribunal (TDSAT) was formed in 2000.

### MARKET SHARE OF INDIAN FIRMS

(Ranking Arranged In Decreasing Market Share)

Wireless service providers	Market share (figures in %) by march 2022
1. Reliance Jio	35.37
2. Bharti Airtel	31.55
3. Vodafone Idea	22.83
4. BSNL	9.96
5. MTNL	0.28

Source : www.statista.com

### EVOLUTION OF TELECOM INFRASTRUCTURE OVER THE YEARS

- The introduction of 2G (Second Generation) of cellular network took place in 2008 which enabled services like SMS, multimedia messaging etc. To achieve higher data rate General Packet Radio Service (GPRS) and Enhanced Data GSM Evolution also were developed to improve the data rate for GSM networks.
- With the development of UMTS introduction of 3G took place which enabled services like multimedia chat, email, video calling.
- IEEE developed the 4G systems to provide higher data rate and advanced multimedia services. It also provided video conferencing facilities.
- 5G is expected to provide better latency, higher data rate, higher security and reliable and cloud based infrastructure networks that will create a complete revolution of mobile technology.

Under the PM *Gatishakti National Master Plan* Department of Telecom is co-ordinating to get various telecom assets like optical fiber cable (OFC), Tower/BTS mapped on the MNP

platform. About 10 lakh RKM of OFC of PSUs like BSNL, BBNL, GAIL, Powergrid, Railtel have been mapped on NMP platform. 5.72 lakh towers with about 19 lakh BTS have also been mapped. Mapping helps in quick fiberisation of the unfiberised towers, helps in utilization of the unused OFC.

Telecom tower infrastructure have developed a lot which paved the way for the growth of India's telecom sector. The number of mobile towers rose from 400000 in 2014 to 727000 in 2022 recording a growth of 81.75 per cent since 2014. Deployment of commercial small cells have also reached 100000. The number of mobile base transceiver stations have increased from 800000 to 2.32 mn in 2022. There has been significant increase in lattice, guyed, monopole, roof top and ground mounted towers during the past few years.

### ROADMAP OF 5G NETWORK IN INDIA

The National Digital Communications Policy presents a positive vision for the industry and the nation towards realizing the ambitions of the Digital India Initiative. Under Digital India Initiative successful implementation of few schemes like Digital India Bhashini, Digital India Genesis will play crucial role in telecom sector's growth.

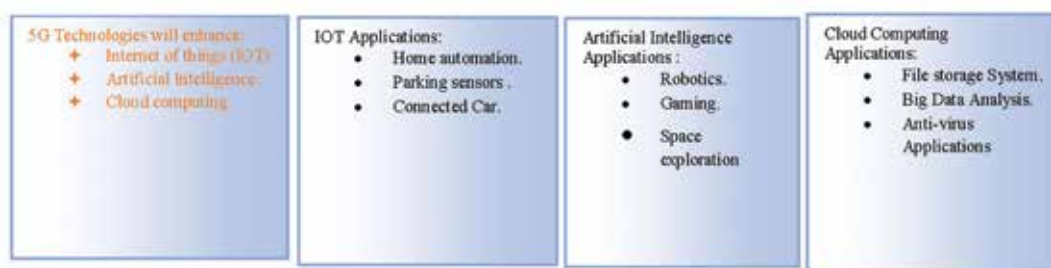
5G spectrum auction has taken place in which major players were Reliance Jio, Airtel, Vodafone idea. Adani enterprises is the new entrant in the sector and also participated in 5G auction. Reliance Jio came first winning \$11 billion out of India's 5G spectrum auction \$ 19 billion. Airtel \$ 5.4 billion, Vodafone Idea \$ 2.4 billion. New entrant Adani group acquired 400 MHz of spectrum worth Rs 212 crore. To start with Kolkata, Chennai, Lucknow, Pune, Delhi, Mumbai, Gurugram, Hyderabad, Jamnagar, Bengaluru, Ahmedabad, Chandigarh, Gandhinagar will get 5G initially from October. 5G technology will help easy access to services like e-health etc.

### RECENT DEVELOPMENTS IN THE SECTOR

- Huawei and Bharti Airtel conducted India's first successful 5G network trial in Manesar, Gurgaon at Airtel's network experience centre. MOU signed with Nokia and Ericsson by Airtel to support the company in its preparations for 5G rollout. Ericsson will start manufacturing 5G radio products in India for domestic consumption.
- Reliance Jio engaging with vendors like Nokia, Ericsson and Samsung for 5G trials. It had done trials in Mumbai with its indigenous equipment. Other than Mumbai Jio had applied for trials in Gujarat, Hyderabad, Delhi.
- In the absence of Chinese vendor Vodafone Idea has proposed 5G trials with vendor like Ericsson.
- In Pragati Maidan, Prime Minister Narendra Modi tests driving a car in Europe virtually from Delhi by

using India’s 5G technology. Government of India will set up 100 labs for 5G technology across India

and at least 12 labs are to be used to train students and conduct experiments.



**SWOT ANALYSIS IN TELECOM SECTOR**

SWOT stands for Strengths, Weaknesses, Opportunities and Threats

<p><b>1. Strength :</b> Huge customer Potential.</p> <p>1. Weaknesses: Most competitive market.</p>	<p><b>3. Opportunities:</b> More quality service.</p> <p>4. Threats : Maintaining high ARPU.</p>
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**INVESTMENT AND GOVERNMENT INITIATIVES IN THE SECTOR**

Why telecom sector is attracting a lot of investment nowadays because of emerging opportunities in the sector like :

Marketing Analyst in this sector examines exponential data growth, finds new customer segments, growing subscriber base, better return on investment, positive efforts by government by allowing FDI limit upto 100%.

- ⊙ *National Infrastructure pipeline* provides attractive investment worth more than Rs 100 crore . A well planned NIP will attract more infrastructure projects and, empower businesses to generate more jobs .
- ⊙ Under *Atmanirbhar Bharat Abhiyan* production linked incentives (PLI) scheme is planned for manufacturing of telecom and networking products worth Rs 12195 cr. For the design led manufacturing scheme of the existing PLI scheme incentives worth more than Rs 4000 cr is planned.
- ⊙ *Bharat Net project* is one of the world’s largest rural broadband connectivity programme using optical fiber. Implementation of the project will take place in two phases .Target set by DOT is to provide 100 per cent broadband connectivity in the villages.

Particulars	Upto end of 2022	Upto end of 2025
Percentage of Fiberisation of mobile towers.	55%	70%
Average boardband speed	25mbps	50mbps
Optical fiber coverage ( in km )	3000000	5000000

Source : investindia.com

Earlier this project was declared valid upto 2024 but has

ssince been extended till 2025.

*Bharat net Projects* aims to provide internet connectivity in remote and rural areas . Investment under this scheme is to the tune of Rs 61,109 crore. Upto July 2022, 5,84,747 km length of OFC had been laid connecting 1, 87,245 Gram Panchayats. In 1,81,888 Gram Panchayats the service is ready on fibre and satellite.

- ⊙ *FDI inflow* : The Government allowed FDI limit upto 100 per cent in this sector which helps to attract more investors. During 2000- 2022, the FDI inflow in telecom sector has been ~Rs 3833 crore. Due to FDI in telecom sector, consumers will be able to make more choices of networks. It will also improve the telecom infrastructure and enable providing telecom connectivity to all corners of the country.
- ⊙ The Government in the Union Budget 2022-2023, has provided Rs 84,587 crore to the Department of Telecommunications for the development and growth in the sector whereas in UNION BUDGET 2021- 2022, Rs 58737 crore was allocated to this Department . A significant increase of investment by the Government to the telecom sector is clearly seen from the recent policy measures.

**CONCLUSION**

Despite various challenges to the telecom sector, it emerges as one of the employment generating sector of the country. Government initiatives play a critical role in the development of this sector. Steps taken by the Government will help to bridge the digital divide and strengthen the make in India initiative. Although, the telecom industry is facing many challenges in infrastructure sharing, spectrum sharing etc the industry will still generate jobs to lakhs of skilled workers in 5G related technologies by 2025.

Successful trials of 5G will pave the way for better tele-medicine, tele-education and such other services in the near future. The future prospect of telecom industry is bright where the industry will contribute in the vision of accomplishing a \$1 trillion economy by the end of 2025. MA

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# INFRASTRUCTURE DEVELOPMENTS IN INDIAN TELECOM INDUSTRY: CHANGING THE COURSE OF INDIA'S FUTURE

## Abstract

*Telecommunications (or telecom) infrastructure means physical medium by which connectivity flows. Globally, India is in the second position in the telecom industry with 1.17 billion subscribers as of July, 2022 (wireless and wireline). The performance of the telecom industry depends on its infrastructural support. Adequate infrastructural support ensures better telecommunication services. In India, innovative developments in the telecom industry are clearly observed during the last few years. To understand the developments of telecom infrastructure, different components of telecom infrastructure have been considered in this study. Accordingly, it provides a snapshot on the recent developments of different telecom infrastructure components of India.*



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## INTRODUCTION

At present, in digital world, for development of any emerging economy, the contribution of the communications sector, specifically telecommunications (or telecom) sector is essential. Telecommunication has become an integral part of an innovative and technologically driven economy. The quality of services of the telecom sector depends on its infrastructure. In general,

infrastructure is the combination of systems and facilities that serve as the basis for the growth and development of a country.<sup>1</sup> In the same way, adequate telecom infrastructure is required to render better telecom services. Telecom infrastructure ensures the connection of networks to villages, towns, cities, countries, and even overseas.

In case of India, the telecom

<sup>1</sup> <https://www.blackridgeresearch.com/blog/what-is-infrastructure-and-types-of-infrastructure-projects-for-economic-development>

industry is rapidly growing and witnessing many developments in recent times. After economic reforms, telecom sector has been playing an important part in India's infrastructure development (Agrawal and Garg, 2022).

India, like many other developing countries in the World, has reformed the telecom industry recently by selective investment and adoption of latest technology. India is one of the biggest data consumers in the World. Hence India is having huge scope to

develop its telecom industry.

As per report of IBEF<sup>2</sup>, the Department of Telecommunications was allocated ₹ 84,587 crore (US\$ 11.11 billion) in the Union Budget 2022-2023. Revenue expenditure accounted for 36 per cent and capital expenditure accounted for 64 per cent. A significant development in telecom tower sector of India has been observed in the last few years. The number of cellular towers of India has increased from 400,000 in 2014 to 660,000 in 2021. Likewise, the number of cell sites has grown rapidly by 187 per cent, from 800,000 in 2014 to 2.3 million in 2021. At present, India's telecommunications market is in second position.

As mentioned in the report of SIRU<sup>3</sup>, the telecom sector of our country is the third largest sector in foreign direct investment (FDI) inflows, accounting for 6.44 per cent of all FDI inflows. It supports to create 2.2 million direct jobs and 1.8 million indirect jobs. In the telecom industry, FDI is currently 100 per cent permissible, out of which, 49 per cent can be carried out through the automatic route, in addition to the Government route. In recent times, innovative developments in the telecom sector are clearly observed in India. Now, the country is on the verge of enjoying 5G services..

For this study, 5G network, number of telephone subscribers (wireless and wireline), number of broadband subscribers, use of internet, number of IP-I, number of towers and BTSs are considered as indicators of telecom infrastructure sector.

## ANALYSIS OF RECENT DEVELOPMENTS

With the help of secondary data collected from different reports, research papers and web-based materials, the following important components of telecom infrastructure have been identified and analysed.

### 1. 5G Network

India has already moved for the big thing in telecom industry. The most significant development in Indian telecom industry is 'launching of 5G (Fifth Generation) network'. On 1<sup>st</sup> October 2022, our Prime Minister launched the first phase of 5G services (commercial) for 13 cities across India which will help in easier deployment of telecom infrastructure. 5G is the latest invention in wireless technology. It will help to meet the vision of development of telecom infrastructure services in an integrated way.

Fast and secure connections between devices aside from smart phones, such as sensors, vehicles, robots, and drones may be accessed through 5G network services (Ray et al., 2020). 5G technology can have a deep impact on all the industries. It will transform lives in the country and

<sup>2</sup> <https://www.ibef.org/industry/telecommunications>

<sup>3</sup> <https://www.investindia.gov.in/team-india-blogs/telecom-industry-india-crosses-milestone>

boost India's economic growth. 5G will provide a new dimension to make the schemes like the Digital India, Smart Cities, Smart Villages missions, Make in India, and Startup India success. 5G must reach the economically backward people of rural areas. It will help our society by inclusive development of telecom infrastructure.

FIGURE 1: PHASES OF MOBILE NETWORKS IN INDIA



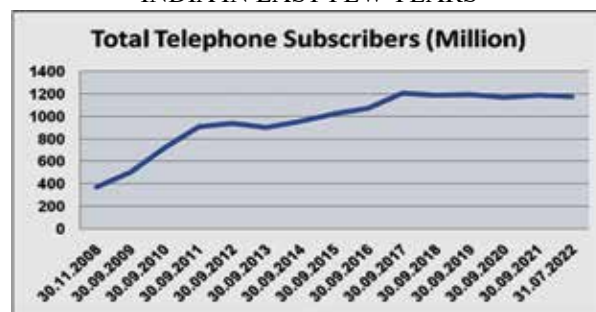
Source: Making India 5G Ready, Report of the Steering Committee, 5G High Level Forum, Published on 23.08.2018

From Figure 1 it can be observed that 5G network is the latest invention in wireless technology which will be used commercially.

### 2. Telephone Subscribers

In earlier days, telecom infrastructure was mainly based on wired telephone connections. But now, for our country, this is the right time for switching over from wired network to wireless network. India's telecom network secures second position in the Globe based on the total number of both fixed telephone and mobile phone users. As per TRAI,<sup>4</sup> the telephone subscribers (in number) in India was 1,173.66 millions in July end (2022) and month-wise increase rate was 0.06 per cent (as shown in Figure 2). The growth rate was not so remarkable after 2016 – 2017 in India because that was the right time to move towards wireless connectivity.

FIGURE 2: TOTAL TELEPHONE SUBSCRIBERS OF INDIA IN LAST FEW YEARS

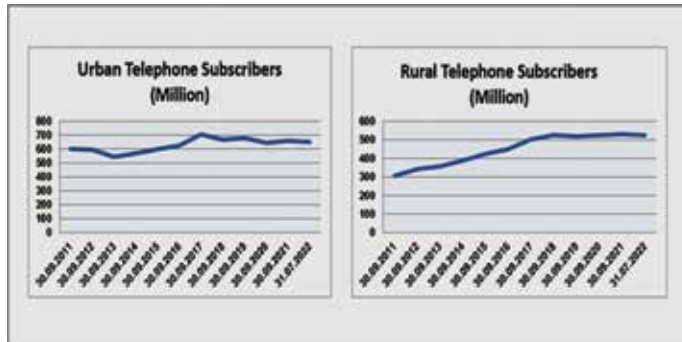


Source: The TRAI, GoI and representation made by authors.

<sup>4</sup> [www.trai.gov.in](http://www.trai.gov.in)

As per TRAI, the total number of telephone subscribers in India fell by 0.24 per cent to 117.7 crore users in June, 2022. After that, the researchers considered urban and rural telephone subscription separately as shown in Figure 3. Both urban and rural telephone subscription increased slowly during the last five years and that ensures switching over from wired network to wireless network.

FIGURE 3: URBAN AND RURAL TELEPHONE SUBSCRIBERS OF INDIA IN LAST FEW YEARS

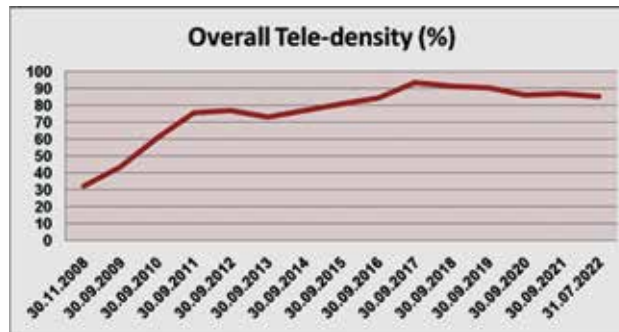


Source: The TRAI, GoI and representation made by authors.

### 3. Tele-density

As per World Bank definition<sup>5</sup>, tele-density may be measured by telephone connections (in number) for every hundred people living within a SPECIFIED area. As per Figure 4, the overall tele-density in India is 85.11 PER CENT at the end of July, 2022.

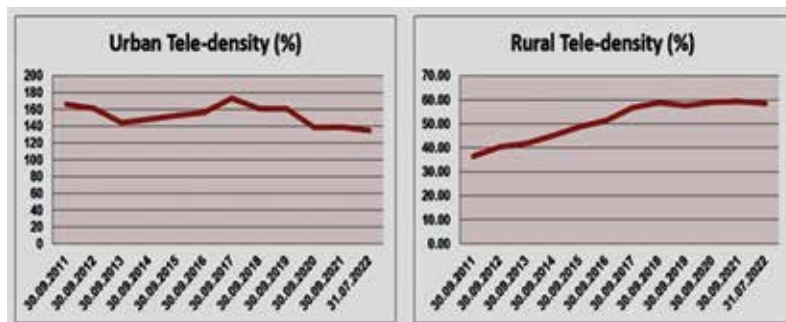
FIGURE 4: OVERALL TELE-DENSITY OF INDIA IN LAST FEW YEARS



Source: The TRAI, GoI and representation made by authors.

The urban tele-density is 134.78 per cent at the end of July 2022, though, tele-density in rural areas is 58.37 per cent during the same period (Figure 5). It indicates that certain policies have forced Internet Service Providers (ISP) to enhance their investment level in rural telecom infrastructure during last few years.

FIGURE 5: URBAN AND RURAL TELE-DENSITY OF INDIA IN LAST FEW YEARS



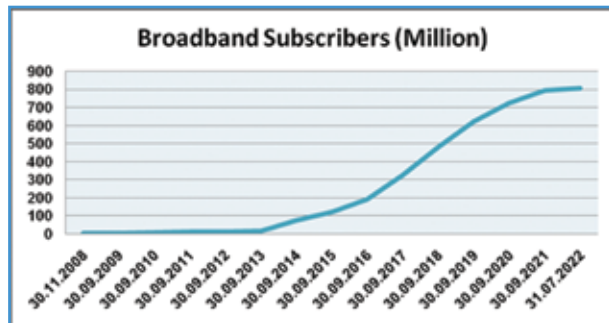
Source: The TRAI, GoI and representation made by authors.

<sup>5</sup> <https://www.worldbank.org/en/news/feature/2014/10/20/how-telecommunications-changed-the-lives-of-herders-in-mongolia>

#### 4. Broadband Subscribers

As per the information received from 694 operators in July, 2022, the total number of broadband subscribers is 807.42 million at the end of July, 2022 and month-wise growth rate was 0.81 per cent (as observed in Figure 6).

FIGURE 6: TOTAL BROADBAND SUBSCRIBERS OF INDIA IN LAST DECADE



Source: The TRAI, GoI and representation made by authors.

To make India a digital economy, huge investment in telecom infrastructure has been made by Government of India. Actually, broadband connection in India has got its momentum after 2013.

#### 5. Infrastructure Provider Category- I (IP- I)

As per TRAI, the IP-I are the suppliers of assets such as Dark Fibre, Tower etc. for telecom industry. DoT, GoI invited applications for IP – I registrations in the year of 2000 for the first time. Figure 7 shows the increasing trend of IP-I registered companies in India which clearly establishes the development of Indian telecom infrastructure.

FIGURE 7: NUMBER OF THE INFRASTRUCTURE PROVIDERS (CATEGORY-I)

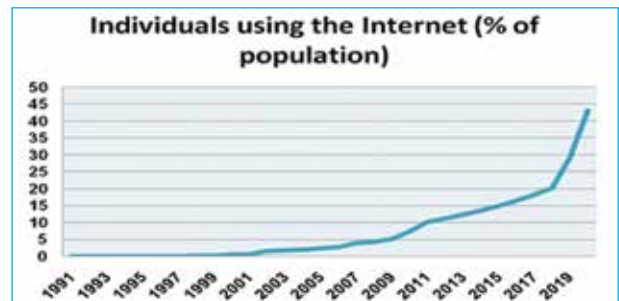


Source: The TRAI, GoI and representation made by authors.

Now, after the Covid pandemic, internet connection has become the backbone of everyday life in India and the performance of telecom infrastructure depends (directly or indirectly) on internet connectivity. Though, India still has a long way to reach all with internet connections, the

Government of India has set the target for this. To establish large and effective telecom infrastructure, India needs to ensure that everyone has access to the internet.

FIGURE 8: USE OF INTERNET BY INDIVIDUALS OF INDIA



Source: The TRAI, GoI and representation made by authors.

Figure 8 shows that the Indian telecom industry has been experiencing a rapid growth in the use of internet during the last few years.

#### 6. Wi-Fi Hotspots

In addition to the above developments, modern technology like Wi-Fi Hotspots connectivity has been explored a lot in India (Table 1).

TABLE 1: NUMBER OF PUBLIC WIFI HOTSPOTS (31.03.2022)

Region of Service	Public WiFi Hotspots (Nos.)	Access Points (Nos.)	No. of WiFi Users (Unique)	Total Data Used (GB)
All India	1,01,822	3,38,619	1,46,77,035	2,69,17,403

Source: Internet Service Providers (ISP) and TRAI<sup>6</sup>

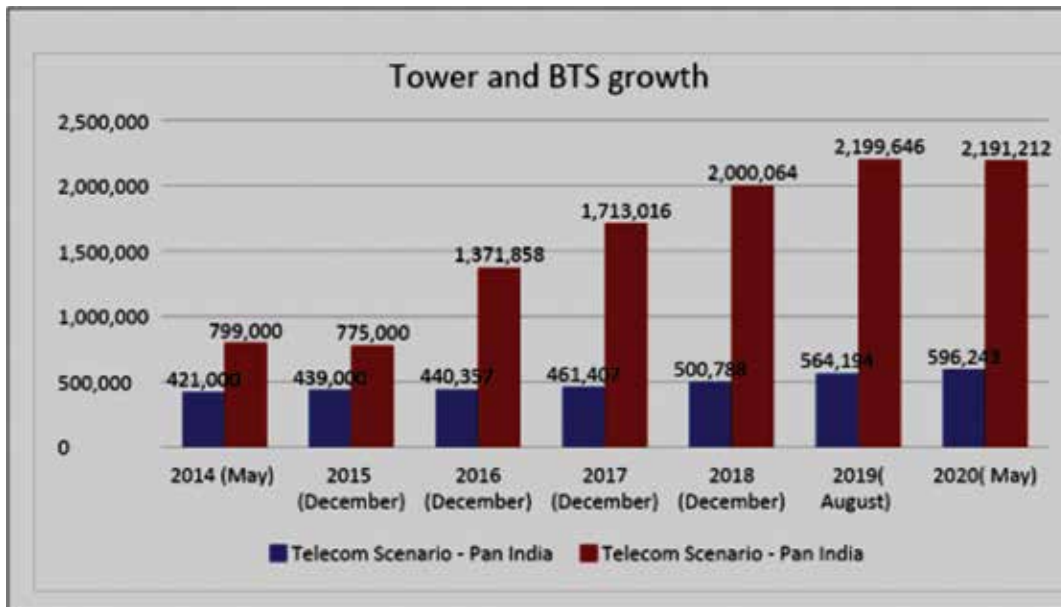
#### 7. Tower and Base Transceiver Station (BTS)

BTS may be considered as a telecom infrastructure (network equipment) component that facilitates wireless communication between a device and network. A robust infrastructure growth in BTS has been experienced in India, as evident from Figure 9. As of May, 2021, there were 5,96,243 towers and 21,91,212 BTSs, an increase from only 4,21,000 towers catering to 7,99,000 BTSs of May, 2014. Towers increased by 41.63 per cent and BTSs by 174.24 per cent.

<sup>6</sup> [https://www.traai.gov.in/sites/default/files/QPIR\\_26072022\\_0.pdf](https://www.traai.gov.in/sites/default/files/QPIR_26072022_0.pdf)



FIGURE 9: GROWTH OF TOWER AND BASE TRANSCEIVER STATION (BTS) SINCE 2014



Source: <https://telecom.economictimes.indiatimes.com>

**India's telecom network secures second position in the Globe based on the total number of both fixed telephone and mobile phone users**

#### CONCLUSION

The telecom infrastructure sector has grown and developed rapidly in last few years. Through appropriate and transparent policies, the Government of India really developed the telecom sector and its markets across the country. Now, the people of rural India are getting access to telecom services. The Government of India has also taken right steps during and after the pandemic to boost the telecom infrastructure. The rapid growth witnessed by the telecom infrastructure components has led to the development of the overall telecom industry during the last few years. Now, the Indian telecom industry is having enormous scope of investment and definitely, it will

change India's future. **MA**

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# IMPACT OF INFRASTRUCTURE, MARKETING, AND PRICING STRATEGIES ON CUSTOMER SATISFACTION OF TELECOM USERS A SECTORAL STUDY



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## Abstract

*The rapid growth and development of information technology has increased the competitiveness of the Indian telecom industry, leading to the intensification of competition in this industry. To evaluate telecom users' customer satisfaction and preference for buying a particular network, researchers developed a model using five constructs: telecom network infrastructure, telecom provider marketing strategy, telecom network pricing policy, preference for buying, and customer satisfaction. The study concluded that pricing and marketing, not telecom infrastructure, influence consumer preferences. Infrastructure, not pricing, affects customer satisfaction in the telecom industry. Customer satisfaction can be affected by SIM preference. Airtel, BSNL, Vodafone Idea, and Jio have similar perceptions when compared.*

## INTRODUCTION

India is now world's second-largest telecom market. (Tanwar & Mittal, 2022) Indian telecom has consolidated from fourteen carriers in 2016 to four operators in 2021, although competition is intensifying as seen by the number of unique porting requests issued by Indian mobile consumers, which reached 5.74 million in March 2020 and continues to rise. (Bhale & Bedi, 2021). Customer satisfaction, is a metric used to assess how satisfied customers are with a telecom company's products, services and capabilities. Because of varying customer demands, service providers in the Indian telecommunications industry are now facing numerous challenges to their long-term viability

in a competitive environment. In the telecom industry, service quality basically measures how well a telecommunication network meets a customer's expectations. The company's telecommunications infrastructure affects customer expectations. It includes wires, satellites, microwaves, and 5G mobile networks. Infrastructure facilities, marketing strategies, and pricing strategies all contribute to customer satisfaction in the telecom industry.

Thus, researchers have analysed the perception of customer satisfaction of users of Airtel, Jio, Vodafone-Idea and BSNL. The researchers have analyzed whether preference for buying a particular telecom network is impacted by Infrastructure facilities, Marketing strategies and pricing strategies. The researchers have also studied about customer satisfaction in telecom sector based on infrastructure facilities, pricing and preference for buying. By applying multigroup researchers have also compared the perception of users of Airtel, Jio, Vodafone-Idea and BSNL.

### REVIEW OF LITERATURE

*John, (2011)* used factor analysis to determine the main elements affecting BSNL customers' loyalty. Trustworthiness, relationships, image, value-added services and swapping phone numbers influenced BSNL customer loyalty. The results highlighted that BSNL must modernize its technology and portray itself as young-friendly, as youth are the main market for mobile providers. *Danish et al., (2015)* suggested that telecom sector customer care is vital for customer retention because customers demand prompt problem solutions and feedback. *Qalati et al., (2019)* conducted a study to find out mediating role of consumer buying behaviour and conclude that there is direct relationship of price with customer satisfaction in telecom sector. *Savant et al., (2021)* analysed

**The pricing strategy of the telecom industry has no effect on customer satisfaction, but its infrastructure does**

Bharti Airtel, BSNL, Reliance Jio, and VI – Vodafone Idea using balance scorecard. Airtel has showed a reasonably consistent performance from a consumer viewpoint, despite other incumbent carriers declining. BSNL has maintained a consistent market share by not losing customers to competitors. Vodafone-Idea is losing market share and customers. *Das (2021)* concluded that respondents are satisfied with Jio-services. His study concluded that Reliance Jio Limited should improve their network speed in Mandya city in order to reach maximum customers. *Vijayaragunathan & John, (2022)* used the Markov Prediction Chain model to understand young subscribers' preferences for network service providers in Pondicherry, India, and concluded that public sector players lose to private sector players. *Bamoriya & Singh, (2011)* adopted descriptive design and suggested that from consumers' perspective security, privacy and standardization of services are the critical issues for choosing telecom network. *Charan, H.N (2022)* concluded that most of the telecom customers are expecting quality in service. According to *Pattnaik & Mishra, (2022)* provision of quality service, initiatives of public relationship programs and generation of timely customer satisfaction play a significant role in the variation of customer loyalty.

*Although, a lot of research is being the done in telecommunication sector with reference to customer satisfaction, no study indicates*

*comparison of users of Airtel, Jio, Vodafone-Idea and BSNL related to infrastructure facilities, marketing and pricing strategies.*

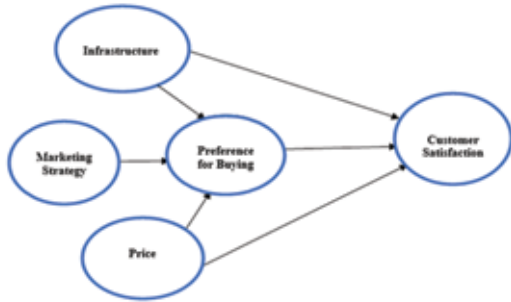
### CONCEPTUAL FRAMEWORK

To critically evaluate the customer satisfaction of telecom users and their preference for buying a particular network, *the researchers developed a model using five constructs (Figure 1): four independent variables, namely infrastructure facilities provided by telecom networks; marketing strategy of telecom providers; pricing policy of the telecom network; preference for buying; and one dependent variable, i.e., customer satisfaction.*

For 'Infrastructure', respondents were questioned on network connectivity and coverage, internet speed, quality of service, reliability of service provider, privacy, process time, and value-added services. For "Marketing Strategy," the researchers raised questions about brand image, new plans and offers, customer care centre service, availability of recharge outlets, TV ads, billboards, and banners, service provider image, service standards, long-term relationship with service provider and billing system. The 'Pricing strategy' includes questions on the price of internet data, fixed rental per month, S.T.D. rates, I.S.D. rates, rates for value-added services like caller tune, information, etc.

'Preference for buying' includes questions like: product/service plays, price, availability of recharge outlets, promotion, employees of the service provider and process time. "Customer Satisfaction" includes questions about how satisfied a customer is with its network's connectivity, coverage area, data speed, value-added services, billing clarity, sales promotion offers, voice clarity, dealer network, and roaming facility.

FIGURE1: CONCEPTUAL FRAMEWORK



Based on the above conceptual framework, following hypotheses can be drawn:

- H1: Infrastructure facilities provided by telecom sector has no significant impact on preference for buying.
- H2: Infrastructure facilities provided by telecom sector has no significant impact on customer satisfaction.
- H3: Marketing techniques of telecom sector has no

significant impact on preference for buying.

H4: Pricing strategy of telecom sector has no significant impact on preference for buying.

H5: Pricing strategy of telecom sector has no significant impact on customer satisfaction.

H6: Preference for Buying a particular telecom SIM has no significant impact on Customer Satisfaction.

**RESEARCH METHODOLOGY**

Non- probability convenience sampling was applied in the research. The data was collected using Google form questionnaire. To assess the appropriateness of the sample size, Taro Yamane’s calculation was used which gives sample size of 400. Data from 452 telecom respondents using Airtel, Jio, Vodafone-Idea or BSNL were used in the study. The data so gathered were analyzed using Jamovi and Smart PLS SEM.

**FINDING AND ANALYSIS**

**Demographic**

TABLE 1: DEMOGRAPHIC PROFILE

Frequencies of Gender								
Levels	JIO		Airtel		Vodafone Idea		BSNL	
	Counts	% of Total	Counts	% of Total	Counts	% of Total	Counts	% of Total
Female	38	36.2%	58	43.3%	48	43.2%	31	30.4%
Male	67	63.8%	75	56%	63	56.8%	71	69.6%
Prefer not to say			1	0.7%				
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>
Frequencies of Age								
Below 18	2	1.9%	2	1.5%				
18-24	41	39%	28	20.9%	37	33.3%	36	35.3%
25-40	53	50.5%	87	64.9%	56	50.5%	47	46.1%
41-60	9	8.6%	17	12.7%	17	15.3%	19	18.6%
61 and above					1	0.9%		
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>
Frequencies of Education								
Higher Secondary	8	7.62%	14	10.4%	21	18.9%	3	2.95%
Bachelor's degree	48	45.71%	93	69.4%	60	54.1%	21	20.6%
PG Degree	41	39.03%	25	18.7%	27	24.3%	65	63.7%
Other	8	7.62%	2	1.5%	3	2.7%	13	12.75%
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>
Frequencies of Occupation								
Govt. Employee	33	31.4%	49	36.6%	27	24.32%	51	50%
Private Employee	9	8.6%	31	23.1%	22	19.82%	36	35.3%
Professional	4	3.8%	25	18.7%	22	19.82%	8	7.8%
Self employed	3	2.9%	7	5.2%	10	9.01%	1	1%
Student	56	53.3%	22	16.4%	30	27.03%	6	5.9%
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>
Frequencies of Income per month								
less than 5,000	41	39.04%	18	13.43%	26	23.42%	33	32.4%
5,001 to 20,000	18	17.14%	56	41.8%	55	49.55%	21	20.6%
20,001 to 50,000	33	31.42%	57	42.54%	23	20.72%	24	23.5%
50,001 to 1,00,000	8	7.6%	3	2.25%	6	5.41%	16	15.7%
1,00,001 and above	5	4.8%			1	0.9%	8	7.8%
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>
Frequencies of Using Mobile connection								
Prepaid	86	81.9%	93	69.4%	97	87.4%	87	85.3%
Post-paid	8	7.6%	33	24.6%	6	5.4%	10	9.8%
Both	11	10.5%	8	6%	8	7.2%	5	4.9%
<b>Total</b>	<b>105</b>	<b>100%</b>	<b>134</b>	<b>100%</b>	<b>111</b>	<b>100%</b>	<b>102</b>	<b>100%</b>

(Source: Authors own calculation using Jamovi)

**Confirmatory Composite Analysis**

**Measurement Model**

Using confirmatory composite analysis, the constructs' reliability was evaluated. Cronbach's Alpha (Nunnally, 1978) Composite reliability and Rho A (Henseler

et al., 2015) values for all five constructs (Table 2) were greater than 0.70 for the purposes of the study, indicating that the questionnaire was reliable according to this model. The minimum acceptable value for average variance extracted (AVE) is 0.50, indicating that anything above this value is acceptable. Table 2

shows the questionnaire meets AVE requirements. The data thus meets all reliability criteria. Smart PLS software calculates factor loading using partial least squares which should be greater than 0.70. All indicators are appropriate because their factor loadings are above 0.70 (Figure 2).

FIGURE 2: MEASUREMENT MODEL

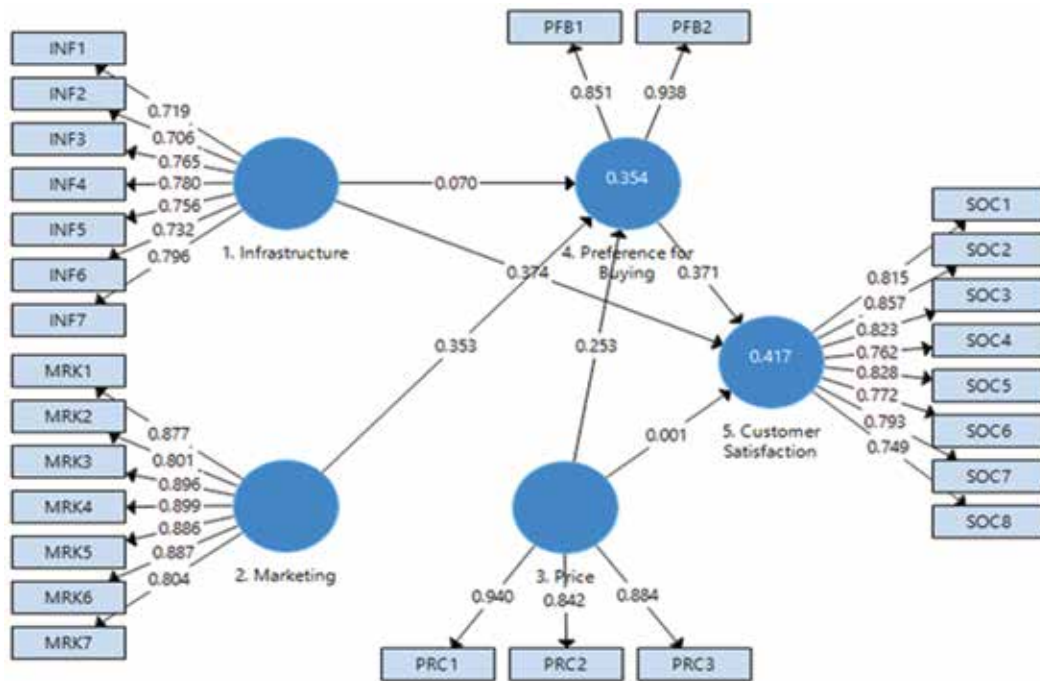


TABLE 2: CONSTRUCT RELIABILITY AND VALIDITY

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Infrastructure	0.871	0.875	0.900	0.564
Marketing	0.944	0.946	0.954	0.748
Price	0.869	0.898	0.919	0.792
Preference for Buying	0.763	0.857	0.890	0.802
Customer Satisfaction	0.920	0.922	0.934	0.641

(Source: Authors own calculation using SmartPLS)

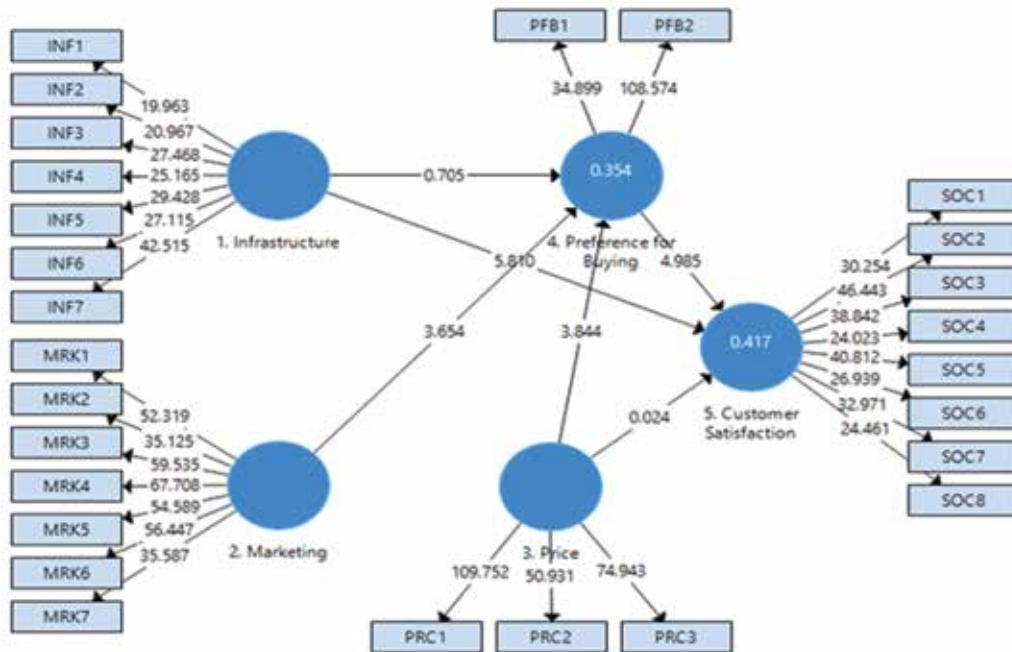
**Structural Equation Model**

The hypothesis was tested and the predictive power of the model was examined, using a boot strapping procedure with 5000 bootstraps. Figure 3 and Table 4 display the analysis' findings. The hypotheses results are indicated by the T statistics and P-value. Statistical significance is defined as a p-value less than 0.05. It indicates strong evidence to reject the null, as the null hypothesis has a less than 5% likelihood of being correct.

Thus, it can be concluded that hypotheses H1 and H5 are accepted based on P-value, while hypotheses H2, H3, H4 and H6 failed to accept the null hypothesis, implying that telecom sector infrastructure has no significant impact on

buying preference and pricing strategy has no significant impact on customer satisfaction. Telecom marketing and pricing strategies affect buying preference. Also, the infrastructure facilities provided by the telecom sector have a significant impact on customer satisfaction, as does the preference for buying a particular telecom Sim.

**FIGURE 3: STRUCTURAL EQUATION MODEL**



**TABLE 4: HYPOTHESES TESTING**

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ((O/STDEV))</b>	<b>P Values</b>
H1: Infrastructure facilities provided by telecom sector have no significant impact on preference for buying.	0.070	0.071	0.099	0.705	<b>0.481</b>
H2: Infrastructure facilities provided by telecom sector have no significant impact on customer satisfaction.	0.374	0.382	0.064	5.810	<b>0.000</b>
H3: Marketing techniques of telecom sector has no significant impact on preference for buying.	0.353	0.351	0.096	3.654	<b>0.000</b>
H4: Pricing strategy of telecom sector has no significant impact on preference for buying.	0.253	0.258	0.066	3.844	<b>0.000</b>
H5: Pricing strategy of telecom sector has no significant impact on customer satisfaction.	0.001	0.004	0.057	0.024	<b>0.981</b>
H6: Preference for buying a particular telecom Sim has no significant impact on customer satisfaction.	0.371	0.362	0.074	4.985	<b>0.000</b>

(Source: Authors own calculation using SmartPLS)

## MULTIGROUP ANALYSIS

A multigroup analysis was conducted between the users of Jio, Airtel, Vodafone-Idea and BSNL. The results can be seen in Table 5 given below. Multigroup analysis has provided results based on boot strapping results of data collected. Multi-group analysis is offered to 6 groups, namely, customers who use Airtel vs customers who use BSNL, customers of Airtel vs JIO, customers of Airtel vs Vodafone idea, customers of BSNL vs JIO, customers of BSNL vs Vodafone idea and customers of JIO vs Vodafone idea (*Multigroup Analysis (MGA) - SmartPLS*, n.d.). All the P values are above .05 implying that there is no change in perception of Airtel, BSNL, Vodafone Idea and Jio when compared to each other. Thus, it can be concluded that there is difference in the perception of these users when compared to each other.

TABLE 5: MULTIGROUP ANALYSIS

	p-Value original 1-tailed (Airtel vs BSNL)	p-Value original 1-tailed (Airtel vs JIO)	p-Value original 1-tailed (Airtel vs Vodafone idea (VI))	p-Value original 1-tailed (BSNL vs JIO)	p-Value original 1-tailed (BSNL vs Vodafone idea (VI))	p-Value original 1-tailed (JIO vs Vodafone idea (VI))	p-Value new (Airtel vs BSNL)	p-Value new (Airtel vs JIO)	p-Value new (Airtel vs Vodafone idea (VI))	p-Value new (BSNL vs JIO)	p-Value new (BSNL vs Vodafone idea (VI))	p-Value new (JIO vs Vodafone idea (VI))
1. Infrastructure > 4. Preference for Buying	0.584	0.442	0.326	0.308	0.189	0.329	0.833	0.884	0.652	0.615	0.378	0.657
1. Infrastructure > 5. Customer Satisfaction	0.762	0.776	0.303	0.495	0.095	0.083	0.476	0.449	0.606	0.991	0.189	0.166
2. Marketing > 4. Preference for Buying	0.243	0.139	0.566	0.368	0.821	0.914	0.487	0.278	0.869	0.737	0.359	0.172
3. Price > 4. Preference for Buying	0.619	0.798	0.842	0.877	0.897	0.646	0.763	0.403	0.316	0.246	0.205	0.709
3. Price > 5. Customer Satisfaction	0.376	0.488	0.841	0.622	0.911	0.860	0.751	0.975	0.318	0.756	0.177	0.281
4. Preference for Buying > 5. Customer Satisfaction	0.051	0.056	0.139	0.585	0.647	0.610	0.191	0.112	0.278	0.831	0.705	0.780

(Source: Authors own calculation using SmartPLS)

## CONCLUSION

The telecom industry in India is now more competitive, thanks to the rapid growth of IT and mobile technology. The study measured user satisfaction in the telecom industry. According to the study, pricing and marketing are the main factors that influence consumer preferences, not telecom infrastructure. The pricing strategy of the telecom industry has no effect on customer satisfaction, but its infrastructure does. Preference for buying a particular SIM can have an impact on customer satisfaction. Furthermore, it can be concluded that there is no change in perception of Airtel, BSNL, Vodafone Idea, and Jio when compared to each other. It can be further concluded that in the age group 41–60, the highest proportion of the respondents used BSNL services when compared to each other. When the education qualification of respondents was compared, it can be concluded that out of the total users of BSNL, 63.70 per cent of users hold a PG degree. When the occupations of different respondents were compared, it was further found that out of all the Jio users, 53.30 per cent are students and out of all users of BSNL, 50 per cent have Government jobs indicating that elderly people have more faith in BSNL as compared to private players. When prepaid and postpaid connections of all respondents were compared, it was noticed that Jio, BSNL, and Vodafone-Idea users mostly have prepaid connections, which account for 81.9

per cent, 87.40 per cent, and 85.30 per cent of users respectively, whereas in the case of Airtel, out of the total users, 69.40 per cent use prepaid connections, whereas 24.60 per cent of users have postpaid connections and 6 per cent used both.

## LIMITATION AND FURTHER STUDY

This study used data from Bhopal and the surrounding area in Madhya Pradesh. If users from other States or mobile companies are considered, results may change. Data was collected via Google form and shared with individuals who knew the researcher. The questionnaire didn't include mobile users from far away, other States, and other countries. Their view may affect the study's results. **MA**

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**Research Bulletin, Vol. 48 Nos. III October 2022 (ISSN 2230 9241)**

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# INDIAN TELECOM TOWER INDUSTRY- KEY ASPECTS AND CHALLENGES

## Abstract

*Gone are the days when people had to wait for months and years at a time to get a personal telephone connection. Now just about anyone can get a mobile connection in a matter of minutes and start communicating with the world, that too at cheap prices. This has been made possible due to the tremendous growth of telecom facilities within the country. Behind this phenomenal success story of Indian telecom is the telecom tower industry which lies at the heart of telecom services. In this article we will review some of the key aspects of this critical infrastructure, some of its major challenges and the latest Government initiatives.*



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## WHAT IS TELECOM INFRASTRUCTURE

Whenever a subscriber makes a phone call or connects to the internet, it is the tower infrastructure that enables the two communicating parties to remain connected. Telecom infrastructure is the physical media through which telecommunication traffic flows and comprises of physical telephone lines, overhead, underground and undersea cables, telephone exchanges or switches, mobile towers, optic fibre cables, microwave towers, and satellite networks. Telecom towers are the most visible part of this infrastructure and house the antennae, receivers, transmitters and other equipment required for wireless communications. The towers themselves are connected to central servers through cables and microwave, a system known as the backhaul. Installation, maintenance and management of all these aspects constitute the telecom tower and infrastructure industry.

## THE INDIAN TOWER INDUSTRY

The Indian tower industry is comprised of two types of companies, those that are owned by telecom operators themselves and independent tower companies with no telecom business of their own who only lease out their infrastructure to telcos on a shared basis. In the initial phase of mobile services most large telecom operators had their own tower infrastructure to carry their voice and data traffic. However, shortly afterwards the operators realised that managing the infrastructure and providing telecom services were two entirely different segments. Consequently, mobile companies with the biggest market shares hived off their tower infrastructure segment into a separate business known as Passive Telecom Infrastructure service. Independent tower operators on the other hand do not offer telecom services and are pure-play passive infrastructure service providers. Also known as the shared tenancy

model, their primary business is to deploy mobile networks, maintain the associated framework and rent it out on a shared basis to multiple telecom operators for a fee.

Today the tower business is considered as a non-core activity by telcos and handled mostly by passive infrastructure providers while the telecom companies focus on telecom services. This bifurcation has benefited the overall industry and made telecom services more competitive and less capital intensive. Since creating new infrastructure is capital intensive most of the telecom operators had huge debts on their balance sheets. After demerging their tower businesses telcos have been able to pare their debt by attracting new investment and monetizing the infrastructure by sharing it with other operators.

## MAJOR TOWERCOS IN INDIA

The biggest tower company in India is Indus Towers with 1,86,474 towers, 3,36,382 co-locations and coverage in all the 22 telecom circles. It was

formed in 2006 as a joint venture between Bharti Airtel, Vodafone and Idea Cellular. In 2020, Bharti Infratel, the tower arm of Bharti Airtel further merged with Indus Towers to make the merged entity the second biggest tower company in the world. It now enjoys over a third of the total market share in India.

Reliance Infratel is the other biggest tower company having over 45000 towers. It is currently undergoing restructuring after being declared bankrupt and the towers will be acquired by Reliance Jio under the insolvency resolution plan. Simultaneously, by late 2020, Reliance Jio's own tower business was sold to Brookfield Infrastructure Partners, a global investment management company and GIC which is a sovereign wealth fund. As per the terms Jio

transferred its network backbone consisting of 1,35,000 towers across India to the two buyers.

In the public sector BSNL and MTNL deploy and maintain their own tower infrastructure and are yet to spin off their tower business. The BSNL/MTNL combined entity has the maximum number of towers outside metros and urban areas making them lucrative to private telecom operators to lease its mobile towers. Consequently, Jio, Airtel and Vodafone are major tenants using the tower infrastructure of BSNL and MTNL.

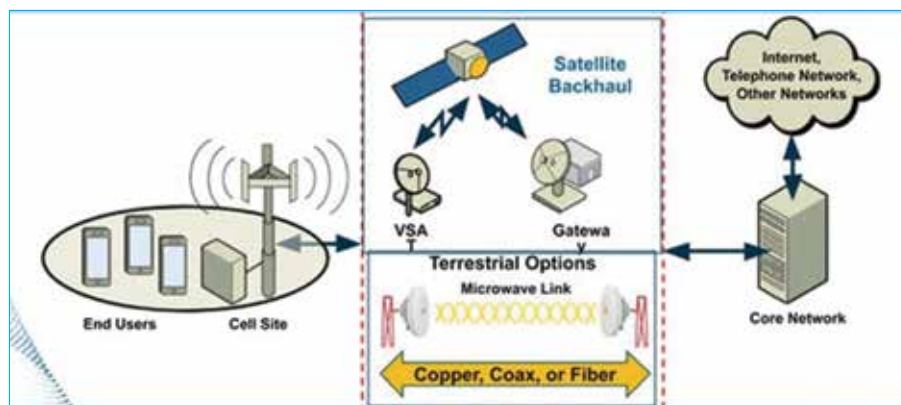
Among the independent towercos, ATC India is the bigger player with GTL Infrastructure having a much smaller footprint. GTL has over 32,000 towers while ATC operates 75,000 towers across India. ATC India

which is a subsidiary of American multinational of the same name is one of the latest entrants to the Indian tower business. Soon after entering India it acquired the tower assets of Viom Networks which itself was the result of an internal reorganization of a joint venture between Tata Teleservices and Quippo Telecom. Both GTL and ATC provide their services to multiple tenants.

### CHALLENGES TO THE INDIAN TOWER INDUSTRY

The two biggest challenges faced by the Indian telecom tower business are limited spectrum bandwidth and low penetration of optic fibre for the backhaul network. The following Image shows what a backhaul network is:

IMAGE 1: CELLULAR BACKHAUL



Source: hughes.com

The backhaul is that part of a telecom network that links the individual sub networks to the core network. Thus, the backhaul connects an individual user to the rest of the world through the service provider's core network. In the preceding diagram the middle section represents the backhaul. An example of a phone call between two users will simplify the concept further.

Say, 'ABC' calls his friend 'XYZ'. To connect the call ;the nearest cell site/mobile tower picks up ABC's mobile's signals and routes it through the backhaul network to the operator's core network. The core server then routes the call using the backhaul to the

cell tower nearest to 'XYZ' which then connects the call to 'XYZ'. Whether it is voice or data, the backhaul is the service that connects the user to its destination.

Mobile backhaul services can be provided using either wired or wireless connections. Wired backhaul connections are routed through copper cables, co-axial cables or optic fibre. Wireless connections on the other hand use microwave networks or satellite communications. Copper and co-axial cables were the mainstay of 2G/3G networks but sparingly used for 4G deployment due to capacity constraints. In 4G architecture optic

fibre is the most preferred solution for the backhaul due to high capacity and low latency.

Though fibre is the most efficient signal carrier, its proliferation on a large scale has been held back due to associated costs. Not only is fibre expensive, laying it underground also entails huge capital inlay and is time consuming. Moreover, it involves Right-Of-Way issues since the associated State/Local Government needs to approve laying of underground cables through its territory, and often involves additional costs. Consequently, just above a third (35.11 per cent ) of the existing tower

infrastructure in the country has a fibre backhaul with the remaining using microwave.

The alternative option of using microwave towers suffers from spectrum constraints which make it an unviable option right now. The challenge with using microwave is that while it can easily handle 4G traffic, the same will not work for 5G since the existing frequency bands used for microwave communications cannot support the high speeds and extremely low latency required for 5G. For microwave to become viable additional spectrum in the E-Band corresponding to 71-76 GHz and 81-86 GHz, and V-Band in the 57-71 GHz frequency bands would be required.

### LATEST DEVELOPMENTS AND GOVERNMENT INITIATIVES

The Government is committed on improving the connectivity across the country in a major way and changes have been made in the telecom policy. In 2018 the Union Cabinet approved a new Telecom Policy called the National Digital Communications Policy, with a view to propagating advanced technologies such as 5G, IoT and AI nationwide. As a follow up to this, in 2019, the DoT released the National Broadband Mission to facilitate broadband access to even the remotest regions.

In 2021 the Cabinet approved a project to provide 4G mobile services in over seven thousand villages in forty four districts across five States. In May '22 funds worth Rs 3,683 crores were approved for this project and the execution has been entrusted to the two largest telcos Airtel and RJio with a deadline of eighteen months. As per the terms Airtel and Jio will install 1,083 and 3,696 towers respectively with an expenditure of Rs 848 crores and Rs 2836 crores. The total project cost including operational expenses for five years comes to almost Rs 6,500 crores.

Subsequently, in 2021 the PM-GatiShakti program was

unveiled which is a national master plan for developing infrastructure within the country, including digital infrastructure. One of the many benefits is launching of the “GatiShakti Sanchar Portal”, a collaborative institutional mechanism between all stakeholders to facilitate the Right of Way (RoW) Application Process through a single interface. Moreover, the RoW application process itself has been simplified by amending the Indian Telegraph Right of Way (RoW) Rules, 2016 and charges have been rationalized.

In July this year the Department of Telecom announced that it would temporarily allot 250 MHz in the E-Band to two telcos for backhaul of towers. This is expected to speed up 5G roll-out because the E-Band has a high bandwidth and can be used for connecting cell-sites through microwave, thus overcoming the time and costs constraints of large scale fibre implementation.

Later in the year, in August, the much anticipated 5G spectrum auctions were held where Jio, Airtel and Vodafone-Idea won the rights to use the spectrum for pan-India 5G services. The required technology has already been field-tested by these telcos and major infrastructure upgrades are underway for countrywide roll out of 5G services. As a result, it is expected that the total number of telecom towers will increase from the existing 7.23 lakhs to over 15 lakhs by 2024-25.

Simultaneously, to improve the speed and quality of broadband fiberization of the network has been gaining traction. Total optical fibre network in the country is expected to touch 50 lakh kilometres by 2024-25 from the current 34.6 lakh km. With greater fiberization, fibre backhaul is also expected to reach 70 per cent from the existing 35.11 per cent in the same period.

### CONCLUSION

Till now the tower industry in India has been dominated by telecom operator owned companies and the

independent service providers striving for a much smaller market share. But with the advent of 5G priorities of the telcos have changed and the industry is going through major changes. Telcos are in the process of selling off their tower assets to pure play operators for deleveraging their core business and better capacity utilization. Having fewer companies has led to standardization of tower technologies, more streamlined processes and lower setup costs. Due to the shared services model there is now a more efficient use of capital and spectrum since the same resources are shared across different telcos. Using the shared tenancy model for the infrastructure has allowed savings in capex and opex for telcos, sometimes to the extent of 50 per cent. This has resulted in a reduction of ownership cost of towers by 35 to 40 per cent thus improving their profits and cash flows.

Tower business in India is now a pioneering example of co-operation and infrastructure sharing in the telecom space. Possibly in the near future telecom companies will become more nimble by completely hiving off their infrastructure to independent, neutral and non-discriminatory tower companies. **MA**

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# SWOC ANALYSIS OF THE INDIAN TELECOM SECTOR: A FINANCIAL VIEWPOINT

## Abstract

*The Indian telecom industry has continued its growth trajectory over the past few years. The Government has also fast-tracked sectoral reforms to facilitate this growth for telecom companies. The FDI inflows in the sector are also showing an increasing trend during the last few years. Despite all these positive aspects, most of the companies in the industry have recorded losses in their financial statements. Hence this research was conducted to analyse the performance of the telecom industry in the last five years, especially from a financial perspective. It will specifically focus on the top fifteen companies which are included in the constitution of the S& P BSE Telecom index.*



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## INTRODUCTION

India's telecom network is the second largest in the world with a base of more than 1175 million subscribers and is the third largest in the case of foreign direct investment (FDI) inflows contributing to almost seven per cent of the country's total FDI inflow. This exponential growth in the sector can primarily be due to the affordability, availability and Governmental initiatives in this sector during the past few years. The changing consumption pattern of mobile subscribers, the rising telecom penetration rate and the wider growth in internet users also are contributing

to this drastic growth in the sector. Recent advancements in the digitalization platforms of the Indian economy are also having a significant positive impact on the growth of telecom companies. In October 2021, the Government also permitted 100 per cent FDI in the sector anticipating the large-scale infrastructure investment requirements owing to the technological advancements that the sector is yet to witness during the implementation of 5-G-centric technological expansions (Jai, 2022; Government of India, 2018b). Recent statistics project a huge subscription for 5G connections i.e., 380 million subscribers by the end of 2025

accounting for almost 30 per cent of the total subscriptions in the sector (Statista, 2022). The telecom market in the country can be split into mainly three segments viz. wireless or mobile phone segment, wireline or fixed-line segment, and various internet services segment including service providers. The overall share of the wireless segment in the country is almost 98 per cent while compared with the wireline segment which is just two percent (IBEF, 2022). There is also a huge increase in the penetration rate of the sector and presently the urban density is about 70 per cent whereas rural tele density is almost 30 per cent as per the latest records (Manchanda

& Roy, 2017).

However, after all these expansions and market penetration, the sector witnessed a decline in gross revenue as per current reports. The gross revenue of the sector which stood at rupees 3273.78 crores in the year 2016-17 has dropped down to rupees 3035.71 crores by the year 2020-2021. Price sensitivity of the customers, huge infrastructural requirements and high competition in the sector can be some of the reasons for this decreasing trend of revenue accumulation in the telecom sector (Nandini, 2014; Zahoor, 2015; Daily Updates, 2022; Asha, 2011). In this context, this research was initiated to study the capital structure composition, financing and investment

patterns, stock market performance and overall financial performance of the telecom companies during the last few years. Such research can be extremely useful to investors and other stakeholders including Government regulatory bodies which are interested to know about the future possibilities in this sector. The study has considered the performance of the top 15 companies in the telecom sector that are included in the composition of the S & P BSE telecom index and the study period was from 2017-18 to 2021-22. Data analysis was conducted using various relative measures like averages, percentages, and ratio analysis. The data was collected from various sources like yahoo finance, the BSE website, and from the annual reports of the selected companies.

### COMPOSITION OF CAPITAL STRUCTURE

TABLE 1

COMPOSITION OF CAPITAL STRUCTURE OF TELECOM COMPANIES (MEAN VALUE)

Years	Capital	Reserves & Surplus	Net worth	Debt	Capital Employed	Debt Equity Ratio
2017-18	1724.75	8629.738	10354.49	9351.268	19705.76	0.33
2018-19	2038.793	9967.797	12006.59	12109.03	24115.62	0.23
2019-20	3422.707	5994.901	9417.607	12447.61	21865.21	0.60
2020-21	3492.721	-3627.18	-134.455	18593.03	18458.58	0.19
2021-22	3732.155	-5445.4	-1713.24	20135.23	18421.99	-0.01

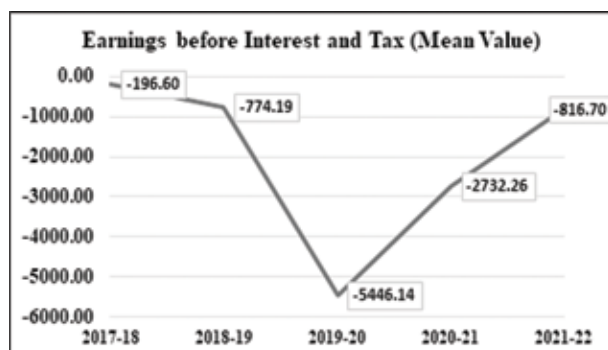
Source: Computed by the researcher

It can be understood from the above figures of Table 1 that most telecom companies are heavily depending on debt financing for meeting their capital requirements. The lack of profits from operations is also a factor for companies to depend on debt rather than owner's equity. The absence of profits also has resulted in a reduction in reserves and surplus and it is showing negative growth during the last two years.

### FINANCIAL PERFORMANCE OF TELECOM COMPANIES

FIGURE 1

TRENDS IN EARNINGS (EBIT) OF TELECOM COMPANIES



Telecom companies are reported with negative growth

in their profits (EBIT) during the study period. It can be observed that the losses in these companies has been showing a decreasing trend in the last two years which can be mainly attributed to the increase in the number of mobile subscribers in the country. Many companies' huge investments in infrastructure development by resorting to debt financing appear to be a major reason for the decrease in profits in most of the selected companies. A thin margin of profit due to reduced tariffs in various telecom services is found to be yet another major reason for this huge loss.

TABLE 2

FINANCIAL RATIOS OF TELECOM COMPANIES

	ROA	ROE	EPS	P/E Ratio
2017-18	-20.21	2.47	2.92	17.65
2018-19	-0.46	-1.30	14.38	29.71
2019-20	-26.28	2.99	-8.25	2.87
2020-21	-11.82	3.78	11.71	10.98
2021-22	-8.75	5.01	10.93	9.63

Source: Computed by the researcher

It can be observed that most of the profitability ratios of the telecom companies are showing a decreasing trend in the last five years and return on assets (ROA) is exhibiting a negative figure even though its intensity has started

decreasing in the last two years. The price to earnings ratio (P/E ratio) which was 17.65 during the financial year 2017-18 has come down to 9.63 in the year 2021-22. Return on equity (ROE) has increased to 5.01 in 2021-22 as compared with 2.47 in the year 2017-18 and earnings per share is 10.93 in 2021-22 as against 2.92 in 2017-18. Market-related profitability measures are having better results as compared with accounting-related profitability measures. This can be due to the positive expectations of investors regarding the growth of telecommunication companies in the coming years.

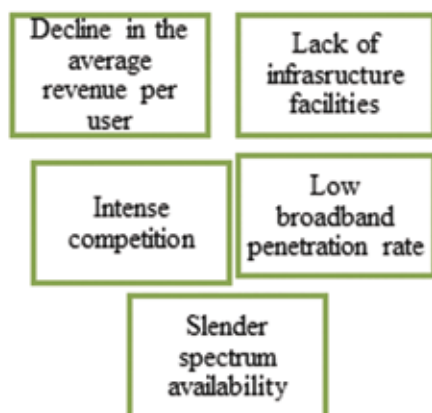
FIGURE 2  
PERFORMANCE OF S&P BSE TELECOM INDEX



The performance of telecom companies is showing an increasing trend in the last few years and this is mainly due to the huge business opportunities in the industry. The telecom index overall had an increase of 553.78 points during the last five years. The index had increased by more than 400 points in the last year primarily because of the announcements regarding 5G technology.

### MAJOR CHALLENGES FACED BY INDIAN TELECOM COMPANIES

FIGURE 3  
MAJOR CHALLENGES FACED BY INDIAN TELECOM SECTOR



**The changing consumption pattern of mobile subscribers, the rising telecom penetration rate and the wider growth in internet users also are contributing to this drastic growth in the sector**

The average revenue generated per user (ARPU) is an important measure used in the telecommunication industry to review its performance at a macro level. It has been observed that most of the companies in the segment are having a decreasing trend in this variable for the past few years. ARPU is computed by dividing the total revenue by the number of subscribers and it indicates the actual revenue generated from each user of the company. Statistics indicate that this has gone down by almost 30 per cent due to the increased cost accumulated for supporting various customer services. The second most important challenge faced by telecommunication companies is the lack of adequate infrastructural facilities in the rural and semi-urban areas and due to this, they are compelled to make large investments in these zones to get access to these untapped segments. Even though many companies are trying to reduce this cost by forming alliances, this appears to be a major hurdle in the telecommunication business. Yet another challenge faced by the companies in the telecommunication sector is the compulsion to reduce their tariffs due to the stiff competition in the sector.

Most of the companies had brought in a substantial reduction in their tariffs, especially after the entry of Reliance Jio into the market with a very low tariff. Another matter of concern for telecommunication companies is the low broadband penetration in the country, which is reported to be less than 10 per cent in the fixed category and less than 30 per cent in the case of wireless, especially in rural and semi-urban areas. Lower digital literacy and lack of access to affordable devices are found to be the major bottlenecks in promoting greater broadband penetration. The absence of wide spectrum availability in the country is also a major hurdle for telecommunication companies to boost their existing business. Soon the country will be witnessing the introduction of 5G technology i.e., from 2023 onwards. However, only a few cities in India are having 5G towers at present and it might take years to introduce this in different areas in the country since it appears to be an expensive process.

### FUTURE GROWTH AND PROSPECTS

The telecommunication sector in India is facing various challenges and proactive Government measures can help the sector to tap various business opportunities it

is presented with. In this context, the Telecom Regulatory Authority of India (TRAI) has a significant role to play especially as a watchdog for the industry. Some of the recent regulatory measures like permitting 100 per cent FDI in the sector, introduction of the Digital India programme, the introduction of disinvestment for tower assets, facilitating the development of Open Access Next Generation Networks, tax benefits, and introducing more friendly reforms related to telecommunication businesses are acting as a boost to the growth of telecom industry. Increased mobile subscribers, untapped rural markets, rising internet penetration, and increased FDI inflow into the sector are some of the crucial factors that can bring huge growth to the sector in the coming years. However, the companies may have to devise better financial management strategies to engage in a sustainable and viable business model. **MA**

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# BLOCKCHAIN'S IMPACT ON TELECOM IN INDIA

## Abstract

*This article describes the current telecom ecosystem's workflow for the commercial distribution of advertising messages. Here, we contrast the current telecom ecosystem workflow with a blockchain-based workflow to solve the unsolicited commercial communication (UCC) problem. Blockchain technology and its effects on telecom are explained. We are talking about the technological and legislative approaches to deal with the spam problem. The discussion is limited to the Indian context.*



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## INTRODUCTION

One of the world's largest wireless marketplaces, India has experienced rapid expansion in the telecom sector, with more than 1 billion active subscribers. The affordable call and short message rate have made it one of the most affordable methods for achieving potential customers and selling services. However, telemarketing or bulk messages can be a reason for fraud and breach of privacy. Phone numbers of potential subscribers are leaked and used for spam.

In our telecommunication ecosystem, there are telecom operators, telemarketers, subscribers, and principal entities generating content for promotion and leveraging telemarketers to reach potential customers and the regulators.

Today blockchain technology is a revolution in various fields. However, the revolution comes with different types of challenges. In this article, we discuss blockchain technology's potential applicability to telecom laws. We specifically talk about the rising issues with unsolicited commercial communication (UCC, sometimes

known as spam), which is sent by SMS and phone calls in India. When a subscriber chooses not to receive a commercial communication, it is known as unsolicited commercial communication. Even this is a big challenge for telecom operators and lawmakers despite various existing measures. Here we are focusing on the blockchain-based solution to solve the UCC problem in India which has been incorporated in the Unsolicited Commercial Communication Telecom Commercial Communications Customer Preference Regulations (TCCCPR'18) and announced on 18 July 2018. With the generalization of blockchain technology in different fields, we believe this can improve our regulatory process of telecom.

## LEGAL INITIATIVE

The centralised organisation in charge of overseeing business communication is Telecom Regulatory National Do Not Disturb (NDND) registry: In 2010 this was introduced by the Telecom Regulatory Authority of India (TRAI). Mobile subscribers were allowed to register themselves for NDND. Telecom service providers had to match their data with the central database of

TRAI Regulatory Authority of India for NDND. This was a 7 days long process after registration. Unless they specifically opted out by submitting their information to the DND register, all subscribers were by default opting in to receive commercial messages. There was a mandatory online registration process for telemarketers with fee charges. After registration telemarketing IDs are assigned to the telemarketer. Some fraudulent telemarketers accessed the registry data of subscribers through this process. After that TRAI fixed the per-day and monthly message limits and mandated to detection of bulk messages for telecom operators. There were higher charges for bulk messages. After registration of the complaint of the telemarketer by the customer for violation of user preferences, there was an increased security deposit required by the telemarketer for ID.

## TECHNOLOGICAL INITIATIVE

Numerous smartphone apps are offered that assist in managing and filtering spam from the SMS inbox. Many of these systems employ rule-based filters that classify messages based on their textual promotional content and mark them. The use of mobile

identifying codes by telemarketers makes it possible to filter promotional messages. On the Google Play store for Android, numerous third-party programs let users manage block lists and prohibit particular SMS senders. Both Google messages and Apple's default SMS software (iMessage) offer the option to block spammers using the settings without the use of any external programs. Despite various initiatives, consumer dissatisfaction continued and complaints were not resolved.

### CURRENT WORKFLOW OF PRINCIPAL ENTITIES, TELEMARKETERS, AND TELECOM OPERATORS

The different stakeholders in the telecom system exchange information back and forth. Restaurants, corporates, online shopping platforms, and various

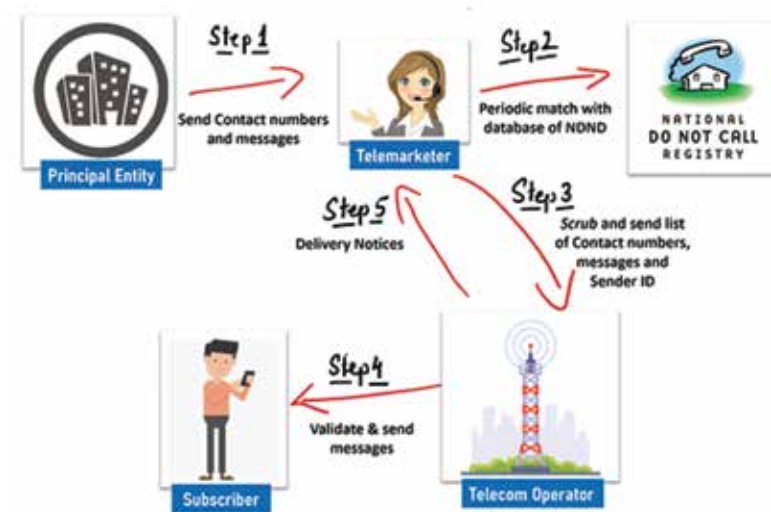
## The use of mobile identifying codes by telemarketers makes it possible to filter promotional messages

service providers are principal entities that create promotional campaigns with the help of telemarketers. Every principal entity should have a sender ID like the domain name of the website in the SMS system. The sender ID is displayed to the receiver SMS for brand recognition. It must be registered by a telemarketer who is a partner in the creation of the promotional campaign. As per the TRAI Regulations, it is mandatory to register six-character

alphanumeric sender ID as SMS Header.

The principal entity gives the telemarketer access to the list of phone numbers of the target people for the promotional campaign. The telemarketer then scrubs (removes the DND-registered numbers from the initial list) and sends the final list and promotional message to a partner telecom operator for sending promotional SMSs under a registered sender ID. The telecom operator i.e. Original Service Provider (OSP) divides the list into regional circles as per the registration of mobile numbers and sends them to the circle operator Terminating Service Provider (TSP) for further transmission to subscribers. TSPs have the opportunity to scrub the phone numbers once more. See the following diagram for this process.

FIGURE 1



A subscriber can register the complaint of unsolicited messages with the help of the mobile application of TRAI or telecom operators' website or SMS-based system. The TSP verifies this with the relevant National Do Not Disturb (NDND), Original Service Provider (OSP), and telemarketer. In the case of default, they have levied fines. This process takes approximately seven working days.

There are many challenges like the breach of privacy, collusion among parties of the telecom system, making matching names fraudulent sender IDs, etc., and the UCC problem is

not fully resolved. The issue of UCC has persistently been difficult for controllers, versatile supporters, and telecom administrators the same. The TRAI revised the UCC guidelines in India and moved from a twofold method of setting client inclinations; for example, full block of limited time content, and negative limitations on special substance, to empowering incomplete blocks.

### BLOCKCHAIN WORKING

Blockchain, a revolutionary new emerging technology introduced with Bitcoin cryptocurrency, is a distributed

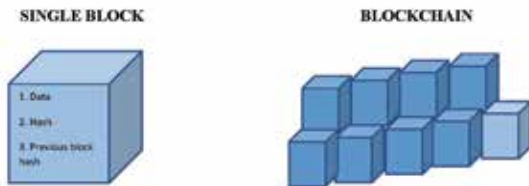
ledger technology (DLT) that may be programmed to record and track anything of value. In this technology, all parties' transactions are shared and synchronized in this network of peers or computer nodes. The transaction information is the same for millions of computer nodes and can be verified. Hence it is called Distributed Ledger Technology (DLT) and has a higher level of transparency.

### Block in Blockchain

Every block in the blockchain contains data, hash, and previous block hash. This technology records

all transaction information or transaction data in a new block with a time stamp when the transaction takes place. It means that for every transaction new block is created. Hash is a computer program containing a unique reference number like a person's fingerprint, which is unique in and of itself. The blocks in the chains are attached, storing the information of the hash of their previous block. As a result, tracking the hash code is a one-in-a-billion possibility.

FIGURE 2



As a result, anytime information in a block changes, it is not rewritten inside the block. Instead, a new block with the previous block's hash will be created. It means alteration is not possible. It is no longer the same block if the hash changes. This helps in tracking and storing the data. But the changing of hash does not guarantee full security. Nowadays, technology is very advanced, and lakhs of hashes can be calculated per second. Hence anybody can effectively tamper with the hash and technically recalculate the hashes of all other blocks to regain the validity of the Blockchain.

### Proof for Security

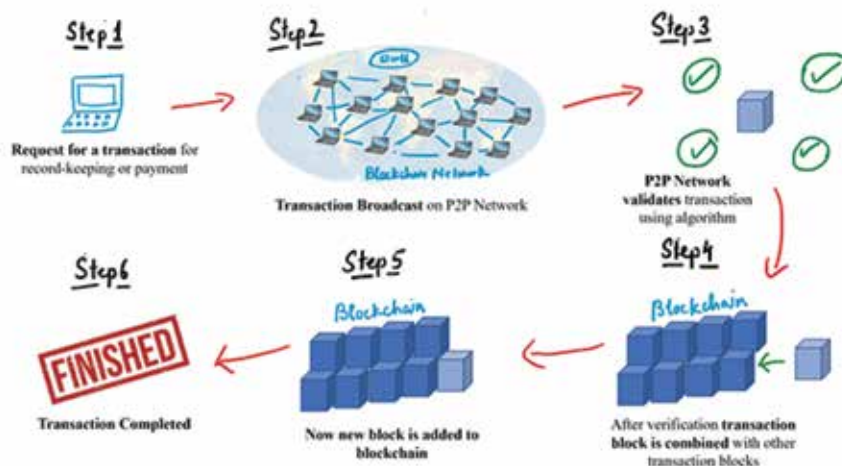
Blockchain is a decentralized consensus technique that does not rely on a central authority or a third party for validation. Every new transaction must be approved by at least 51 per cent of the network's blockchain. There are

- ⊙ Proof of work (PoW)
- ⊙ Proof of stack (PoS) and
- ⊙ Proof of validity (PoV)

consensus methods in blockchain. For the security of every block, there is a hashing mechanism with PoW in the Peer-to-Peer (P2P) network.

Hashing and PoW provide the security of blocks. It's a mechanism that makes the building of new blocks take longer. Anyone can join the blockchain's peer-to-peer network. This decentralized system is intriguing because it allows us to engage with our personal data in real time without needing intermediaries. When a new block is formed, there is a creation of a cryptographic puzzle. The puzzle is solved to check the validity of the block. If it verifies, the new block would be added permanently to the chain. If it doesn't get solved, then the block gets rejected. Therefore if anyone wants to tamper with one block, he has to tamper with all the blocks in the chain, redo the PoW for each block and take control of more than 50 per cent of the P2P network. Only then the tampered block is accepted by everyone else. That is extremely hard to achieve. Thus, it ensures reliability of the data. The data is highly secure inside the block.

FIGURE 3  
BLOCKCHAIN WORKING



On a blockchain, the participants can build a distributed ledger to share information about transactions. These transactions are validated by a consensus mechanism. With communal verifiability, this technology develops trust, transparency, and accountability among the participants. A blockchain that has been given privileges to a group of entities is known as a permissioned blockchain. In this case, these entities

are responsible for the governance of blockchain and verification of all transactions over the network.

### BLOCKCHAIN-BASED WORKFLOW IN THE TELECOM ECOSYSTEM

DLT-based blockchain application is viewed as a way to deal with issues including subscriber data leaks, spam messages, fraud penalties and legal

infractions, among others. The register and preferences system currently in use is an example of how the regulator is involved in the day-to-day operations yet lacks traceability, enforceability for violations, etc. The block chain-based approach would plan for telecom operators to handle the majority of the duties, with the regulator simply responsible for enforcing laws. Strengthening the entire ecosystem

and bringing all participants together are the main requirements. Now there is a block chain network in the telecommunication ecosystem among all parties of the system like telecom operators, telemarketers, subscribers, principal entities, regulators and third-party service providers. With the new entry with the help of a mobile app or website or telecom operator's customer care in the NDND registry, a transaction starts in the block chain network. Every participant has a copy of the transaction on a real-time basis (the time-consuming process issue is resolved). For the security and privacy of subscribers' information in the NDND registry there is the use of cryptography and the hash technique of block chain. Information cannot be leaked to unauthorized telemarketers

or parties. The block chain network manages the header registration (Sender ID) process. It keeps the record of the mapping of sender IDs with principal entities (the fraudulent sender ID issue is resolved). The telemarketer is required to register the content of the promotional message. With the help of block chain after verification and registration now principal entity has valid ownership of its brand sender ID and message content.

In this process in the beginning principal entity sends data of contact numbers and registered approved promotional message content to the telemarketer with the sender ID. Telemarketer scrubs the data independently or does this task with the help of a third-party service. This process initiates the transaction

on block chain also after scrubbing of data. The third-party sends the scrubbed data in form of a token to the telemarketer. The telecom operator may receive the produced token directly from the telemarketer or through third-party services. Before sending the promotional SMSs to the subscribers in their network, the telecom operator validates the token, scans the matching list of phone numbers to send the promotional SMS, and validates the transaction status by, if desired, re-scrubbing them locally. The telecom operator(s) engaged in the message delivery finally send a delivery report with the total number of successfully delivered messages to the telemarketer who started the campaign, which can be utilized for later billing.

FIGURE 4



## CONCLUSION

In the existing workflow, there are many challenges faced by all stakeholders of the telecom ecosystem which can be resolved by the implementation of the proposed blockchain-based workflow. Using block chain mechanisms will improve subscriber experiences, regulatory governance, and the telecommunication ecosystem. India is one of the largest telecom market. India has billions of subscribers requiring a smooth flow of messages without any threats and problems with the privacy and security of personal information. In the future, this can be improved over time with new challenges. This block chain-based process has been a part of our Indian regulations. Our Government has announced the requirements for the implementation of the block chain process in the telecommunication ecosystem. It is hoped that this will take place successfully. **MA**

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# INDIAN TELECOMMUNICATION SECTOR- 2G TO 5G REVOLUTION



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## INTRODUCTION

Indian telecom sector is having a 1.17 billion subscriber base and has emerged to be second-largest market (July 2022) and the 3<sup>rd</sup> largest industry with respect to inflow of the foreign direct investments (FDI) that is contribution of 6.44 per cent of the whole FDI investment. This sector is contributing lots in terms of generating employment opportunities - 2.2 mn jobs directly and 1.8 mn indirect employments. Now the Government has permitted 100 per cent FDI investment through the automatic route in

## Abstract

India as an economy is witnessing growth in different segments and world is looking at India as a potential prospect due to robust demand, flexibilities, expertise, government initiatives, intensification of technology and young population. Amongst different segments, telecommunication sector is witnessing remarkable growth and has emerged as second largest market for subscriber base and third largest in terms of FDI attraction. Telecommunication sector is witnessing the incredible transformation from 2G to implementation of 5G. It is expected that India will become the digital economy of \$1 tn by 2025. This research work is addressing the overview of Indian telecommunication sector, its incredible prospects, Government policy assistance, ample investments availability and future potential. Robust demand and bright future prospect is observed in the Indian telecommunication sector. As per the survey of Zenith media, India is projected as a potential telecom sector advertisement market, with a yearly rate of growth of 11 per cent. It is also found that the government has initiated various structural and regulatory changes to boost telecommunication sector like 100 per cent FDI through automatic route, Satellite based –NB-IoT, production-linked incentive (PLI) scheme and phased manufacturing programme. Revolutionary changes have been observed in the sector from 2G implementation to 5G initiatives.

telecommunication sector. Indian telecom sector is witnessing extraordinary growth over the years. As of July 2022, there were 807.42 mn broadband subscribers. The average monthly data consumption per wireless data subscriber is as follows:

March 2014: 61.66 MB

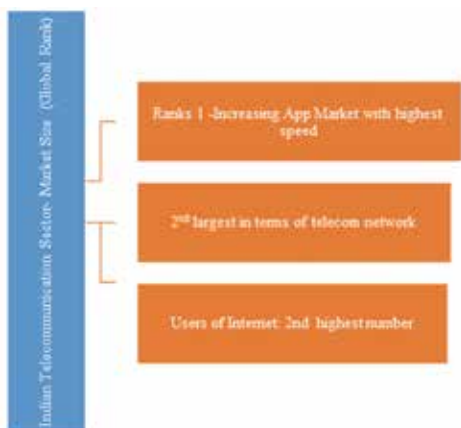
December 2021: 14.97 GB

Increase: 22,605 per cent (Telecom, 2022)

The major drivers for growth of Indian telecommunication sector are affordable tariffs, extensive accessibility, and mobile number portability roll –out, intensifying coverage for 3G and 4G, enhancement in number of subscribers, encouraging governing environs and government initiatives to boost the capacity of the telecom sector. (Telecom, 2022). Mobile virtual network operators (MNVO), infrastructure, broadband and telephone service providers, White Space Spectrum, Equipment, and 5G are the sub-sectors under telecommunication industry. (Drishtias, 2022). The researchers have referred to the report of GSM Association (GSMA) in association with Boston Consulting Group (BCG). There is a growing trend of Indian mobile economy that will make substantial contribution to the GDP of India. India surpassed the US even with respect to the number of app downloads and has emerged as the second largest market. (Foundation, 2022). This article is attempt to provide the overview of telecommunication industry, its incredible prospects, Government policy assistance, ample investments availability and future potential. (Khan, 2022 March 14)

### OVERVIEW OF INDIAN TELECOMMUNICATION SECTOR

Indian telecom industry experienced an extraordinary growth and development after market liberalization since the 1990s and at present this sector has turned out to be one of most competitive and fastest growing market in globe. The Indian telecommunication sector basically comprises of subsectors like telephone service providers, Infrastructure, White Space Spectrum, 5G, Equipment, Broadband and Mobile Virtual Network Operators (MNVO). The telecom tower industry has shown significant growth of around 65 per cent during the last few years. (Telecom, 2022). From 400,000 towers in 2014 it rose to to 660,000 in 2021. Likewise, mobile base transceiver stations numbers increased by 187 per cent. According to GSMA India is predicted to become the second largest smartphone market worldwide by 2025. This is also expected to yield around \$450 bn to the Indian economy during 2023-2040. (SAHAI, July 2020)



This also reflects the current potential of the market and

future expected growth. (Borah, December 2014)

### MARKET SIZE AND POTENTIAL

The basic needs of human beings are food, clothing, and shelter. But now in today's globalized modern era, education and connectivity i.e. Wi Fi have been added. Thus, there is a huge growth for the telecommunication sector is expected especially post covid pandemic.

India has been ranked as second largest telecommunication market. The telecommunication sector's market share is mainly divided into two parts:

- ⊙ Wireless subscriptions
- ⊙ Wired broadband subscriptions

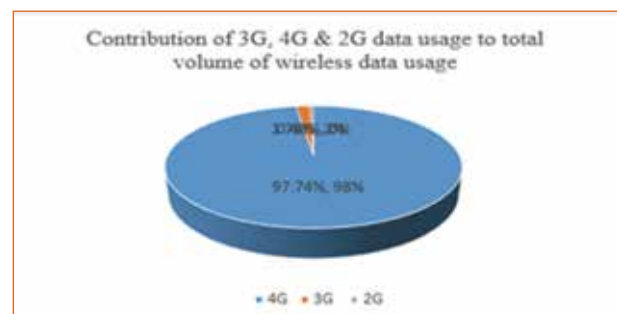
The growth observed over a period of time is as follows: (April 2022)

Parameters	Figures
Tele density	84.88 per cent
Broadband subscriptions	788.77 million
Subscriber base	1.16 billion
Telecom sector gross revenue (First quarter 2022)	Rs. 64,801 crores
Growth of usage of wireless data (First quarter 2022)	16.54% 32397 PB
FDI inflow in telecom sector April 2000 to March 2022	US \$ 38.33
Growth in customer spending on telecom services (FY 21)	16.6% YoY

The above table clearly focuses on the increasing trend of usage in the telecommunication sector in India. It is contributing in the revenue predominantly.

### DATA USAGE 2G, 3G AND 4G

CONTRIBUTION OF 3G, 4G AND 2G DATA USAGE (APRIL 2022)



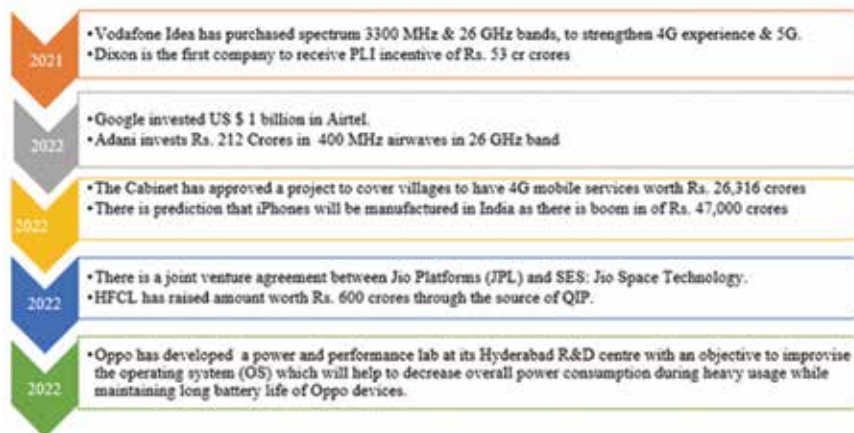
The above graph depicts the proportion of usage of 4G, 3G and 2G data with respect to total volume of wireless data. Almost 98 per cent customers are using 4G data which shows that customers are giving preference to quality of service. 3G and 2G data is almost extinct. The prospects for 5G is bright..

**DEVELOPMENT IN INVESTMENTS**

Telecommunication sector in India is attracting more of investments form different players from within

the country and from aboard. Giants like Vodafone Idea, Dixon, Google, Adani, Jio Space Technology, HFCL and Oppo are investing and enlarging their product portfolio and market. As

there is increasing trend in the demand in telecom sector, huge investment is noticed by domestic as well as foreign companies. Reforms are expected in the coming years. (Vaishnav, 2022)



During the next 5 years, mobile phone penetration will increase and there will be reduction in data cost. It will add to 500 million internet users and new business opportunities. To match with the current technological requirements for 5G like robotics, cloud computing, Artificial Intelligence and Internet of Things, there will be employment opportunities for 22 million skilled workers by 2025. (Melvin Ayogu, 2010)

**GOVERNMENT INITIATIVES AND REFORMS**

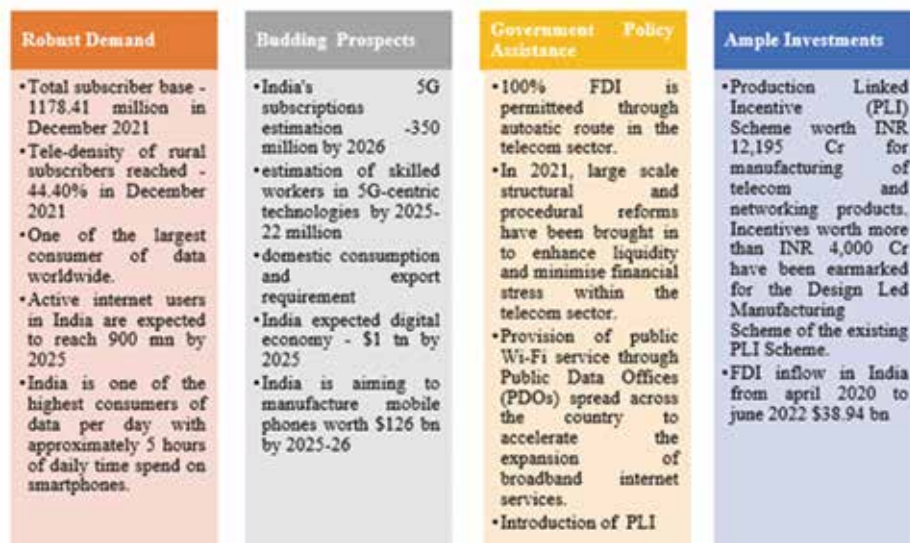
The Union Budget 2022-23, has allocated Rs. 84,587 crore to the

Department of Telecommunication out of which 36 per cent is towards revenue expenditure and 64 per cent capital expenditure. The Department has formed a sixth generation 6G innovation group and quantum communication lab for the development of 6G technology. DoT is working on reducing the license fees to 6 per cent of adjusted gross revenue from 8 per cent . Production Linked Incentive Scheme (PLI) is expected to bring huge investments, direct and indirect.. Many foreign companies are interested in setting up production base in India for telecom and networking products like Samsung, CISCO

etc. India and Japan have signed an MoU in the field of information and communication technology.

**HIGHLIGHTS OF INDIAN TELECOMMUNICATION SECTOR**

It is observed that the telecommunication sector is the fastest growing sector in India due to robust demand, future market potential, government support and initiatives for development and ample investment opportunities and availability. Following data depicts the major highlights of the Indian telecommunication sector.



## MAJOR CHALLENGES IN THE IMPLEMENTATION OF 5G

Indian telecommunication sector is getting increasing attention since 1991 due to accelerating growth, technology adoption and markets size. India's 5G subscriptions will be approximately 350 million by 2026. This is bringing further opportunities but there are also challenges in meeting the expectations and demand.

- ⊙ **Human resources skills sets requirements**” It is estimated that 22 million skilled workers are required to meet the demand to exploit the available opportunity and implement 5G. It is perhaps the biggest challenge as technical skill sets are required in India for telecommunications sector.
- ⊙ **Technological Infrastructure:** For implementation of 5G, the present radio towers are required to be coupled via optical-fibre cables, which be a gigantic challenge. **Global Environment:** The economies of other nations around the world are also going to affect India's telecommunication sector in terms of investments and collaborations due to factors like COVID-19, Russia Ukraine War, and the expected economic recession..
- ⊙ **Investment and Resources acquisitions:** India needs investment of around 2.2 lakh crore for 70 per cent tower **fiberisation to achieve the targeted level.** It is estimated that there is a need for around ₹2.5 lakh crore for the National Broadband Mission and Cellular Operator

**The major drivers for growth of Indian telecommunication sector are affordable tariffs, extensive accessibility, and mobile number portability roll – out, intensifying coverage for 3G and 4G**

**Association of India (COAI) for setting up 15 lakh towers in the next four years.**

### CONCLUSION

Indian telecom sector is witnessing a rapid growth and development due to substantial reforms by governments in telecom policies and regulations along with the surge in consumer demand. With the introduction of reforms like 100 per cent FDI through automatic route or production linked incentive (PLI) scheme for 5G launch, the Government is attempting to meet the demand and exploit the market potential. This sector is also creating ample opportunities for employment. Companies in this sector are doing well in terms of updating the technology, attracting investments and exploiting the market potential. Vodafone Idea, Dixon, Google, Adani, Jio Space Technology, HFCL and Oppo are investing and enlarging their product portfolio and market in this sector. Future is bright for the Indian telecommunication with the rolling out of the 5G. MA

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# DIGITAL INITIATIVES OF THE GOVERNMENT OF INDIA FOR BRIDGING DIGITAL DIVIDE IN HIGHER EDUCATION

## Abstract

*Digital divide is a hindrance and an impediment to the economic development of the nation. This research study discusses some of the digital initiatives of the Ministry of Human Resource Development (MHRD), Government of India for greater access to higher education in our country.*



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## INTRODUCTION

The status of higher education reflects the condition of human resource of a country. Higher education has an important role to play in the inclusive development of the nation. The Government of India through its various policy measures in the field of higher education has demonstrated its commitment in improving the access and quality of higher education through infusion of information technology. The COVID 19 has shown the tremendous opportunity which digital education has in our country. The National Broadband Mission under the National Digital Communication Policy 2018 has the stated objective of broadband for all. The Ministry of Human Resource Development, Government of India has taken several digital initiatives for enhancing the quality, access and penetration of higher education among a vast section of the population.

## REVIEW OF LITERATURE

Arbind Kumar Jha ( 2020 ) described the important steps taken by the Indian Government in the sphere of higher education taking a critical view of digitalization of education in the context of divide, access, equity and pedagogy<sup>1</sup>.

Rachita Arora and Romika Yadav ( 2020 ) discussed the importance of information and communication technology ( ICT ) and its role in providing quality education.<sup>2</sup>

Bishweshar Bhattacharjee and Bireswar Bhattacharjee ( 2020 ) studied the status of education and digital penetration in our country based on the NSS data. They also brought to light the issue of digital divide prevalent among the rural population in our country<sup>3</sup>.

Intekhab Alam ( 2011 ) discussed the initiatives of the Government of India in building Information and Communication Technology ( ICT ) infrastructure and access to information of scholarly nature in

higher education institutions. He has highlighted the various ongoing schemes and projects of UGC and Government bodies to bridge the digital divide among the universities and colleges in various Indian States. He has drawn attention to some challenges and hindrances to bridge the digital divide<sup>4</sup>.

## RESEARCH OBJECTIVE

The objective of the present study is to have an understanding of the various digital initiatives undertaken by the Ministry of Human Resource Development ( MHRD ), Government of India for bridging the digital divide in higher education.

## RESEARCH METHODOLOGY

The present study is based on secondary data such as journals and documents.

## BROADBAND AND HIGHER EDUCATION

Broadband is truly a gift of modern science and technology

and has tremendous utility in various spheres of life such as education, health, administration, agriculture, etc. Broadband is a tool of empowerment. Appreciating the importance of broadband in taking the nation forward, the Government of India through the National Digital Communications Policy 2018 created the National Broadband Mission. The Government, in participation with the concerned stakeholders, wants to take the benefits of broadband to all sections and strata of society.

Broadband has tremendous significance for higher education in our country. The myriad experiences of COVID 19 has blatantly exposed the limitations of the traditional mode of delivery of education as vast sections of students residing in rural India had to suffer due to digital divide. Therefore, it is important in the context of higher education to look beyond traditional approaches of delivery of education and embrace the various tools of information technology so that students, be they in urban or rural India, benefit from higher education without any disruption.

### DIGITAL INITIATIVES OF GOVERNMENT OF INDIA

Some important digital initiatives of the Ministry of Human Resource Development (MHRD), Government of India in the field of higher education are as follows<sup>5</sup> –

1. **Swayam** – Improvement in enrolment in higher education is possible through greater penetration especially in the rural and backward areas where students pursuing or aspiring for higher education suffer from digital divide. *Swayam* is an initiative to address the digital divide in higher education with the goal of providing free online courses in all disciplines. Since its inception, *Swayam* has picked up tremendous

popularity among the student fraternity.

2. **Swayam Prabha** – Television is an important and popular mass media in our country and rapid development in cable technology has ensured significant proliferation of the popularity of television in every part of our country. Leveraging the popularity of television as a mass media, *Swayam Prabha* provides 32 superior quality channels of education through direct to home ( DTH ) all across the country on regular basis. *Swayam Prabha* is also useful for those students aspiring to prepare for IIT JEE.
3. **National Digital Library** – Library is a storehouse of knowledge and provides access to knowledge to the student fraternity. Keeping abreast with developments in science and information technology, libraries are also embracing digitalization for wide scale access to students and learners. The National Digital Library is a single point source for provision of e – contents / resources to learners.
4. **FOSSEE** – FOSSEE is a project that envisages the application of certain tools for the development of education in our country. Some tools that FOSSEE aims to popularize among the students and faculty members for education and research are Scilab, Python, R etc.
5. **National Academic Depository** – Academic awards i.e degrees, diplomas, mark sheet, etc are extremely important for all educated persons that are required to be preserved carefully. Moreover, academic awards are referred for any important work

related to getting admission to educational institutions, job or career. The National Academic Depository ( NAD ) is an online repository of academic awards deposited by academic institutions, academic boards, assessment institutions in a digital format. NAD also ensures authenticity and safe storage of the academic awards deposited with it.

### SUGGESTIONS AND CONCLUSION

The Government of India has taken several commendable steps in enhancing digital penetration in the field of higher education in our country. Adoption of the various tools of information technology has become inevitable for higher education to improve the access, quality and penetration. The adoption of information technology has created a digital divide in the area of higher education as students residing in the rural and backward areas of our country are not completely equipped with the tools of information and communication technology (ICT) leading to their exclusion from the access to higher education. The following suggestions are put forth to bridge the digital divide in the field of higher education –

1. The Government and the private sector should invest more in building infrastructure relating to broadband in rural areas where large section of students live.
2. The Government should come forward with a policy of comprehensive engagement with all the concerned stakeholders for development of education in the rural areas.
3. The Government along with the private sector should invest heavily in developing computer literacy in the rural areas and adopt measures to motivate the rural people to

be comfortable with computer and IT related tools and technology.

4. Initiatives are required be taken by the Government and private sector to develop technology that can translate English into other vernacular languages of our country so that the students in rural areas can benefit from higher education.
5. Institutions of higher learning should take initiatives in training faculty members who are not comfortable with the tools and techniques of information and communication technology.
6. The Government should provide fiscal incentives to personal computer, laptop companies to manufacture these at cheaper cost and provide necessary incentive to the companies to make them available to economically backward students and those living in villages and backward regions of the country.

## The National Digital Library is a single point source for provision of e - contents / resources to learners

Broadband in the field of higher education is extremely significant for the inclusive development of the nation. However, there are various practical hindrances on the way to bridging the digital divide in the field of higher education. Digital divide has unfortunately lead to exclusion of large number of students living in villages from having access to higher education through the digital mode. The Central Government in a spirit of partnership with State Governments and private sector should adopt more proactive digital initiatives and broad based policy measures aimed at benefitting students pursuing higher education in our country. MA

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# TELE DENSITY AND BROADBAND DENSITY IN INDIA: A STUDY OF INTERSTATE AND INTERNATIONAL COMPARISONS

## Abstract

*Riding on the advantages unleashed by market-driven strategies of development and the consequent encouragement to the flow of foreign direct investment, the Indian telecom sector is said to have been revolutionized a lot in terms of access and connectivity. Drawing on data compiled from the Department of Telecommunication (DoT), the present study found that India has witnessed a steady and fast increase in tele density and internet density. Wireline access has gone up at the cost of wireless access. Both rural and urban areas have experienced tremendous improvement in tele density and internet density. Still, wide State-wise inequality prevails in respect of tele density and internet access. International comparison also reveals that India has been much behind the developed countries when it comes to the penetration of internet services. It is expected that with 5G becoming a reality, the 'Amrit Kaal' will pave the way for accomplishing better improvement in internet connectivity at par with the international level and standard.*

## INTRODUCTION

The existence of a well-developed and effective telecommunication infrastructure has been regarded as a prerequisite for the development of all economies (Mbarika, Kah, Musa, Meso, & Warren, 2003). It is true that the Indian telecom sector has shown rapid improvement in many spheres of telecom progress in recent times (Gopika, 2014). Riding on the advantages unleashed by market-driven strategies of development and the consequent encouragement of the flow of foreign direct investment, the Indian telecom sector has been blessed with a conducive atmosphere for its advancement. This, coupled with the advent of mobile and internet technology on a massive scale is said to have revolutionized the telecom sector in India (Sridhar, 2012). However, the pertinent aspect is the shrinking number of players in the field of the telecom sector in India, which is down to just four in 2022 from around 12 in 2008, raising the doubt that the Indian telecom sector might have become an oligopoly market of a different sort (Gupta, 2018). These apprehensions and applause notwithstanding, the Indian telecom sector has witnessed an increase in both tele density and network access. However, a close comparison of the Indian telecom sector with the international circumstances, certain dismal signs may arise. Against this background, the present discussion attempts to present the growth of tele density and broadband density in India in the light of



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inter-state and international comparisons.

## METHODOLOGY

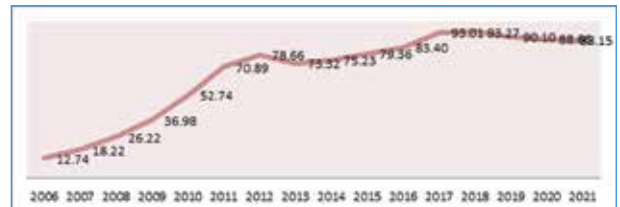
Secondary data have been used for this study. These data have been collected from the Annual Report of the Department of Telecommunications (DTA). For the inter State comparisons, four States have been chosen at random. These are Kerala representing the southern region, Gujarat from western region, Punjab in the northern region, and Assam from the eastern region. For inter State comparison, statistics available for the year 2008 are compared with that of 2021. The study also compares the progress made

by India in teledensity and broadband density with that of the developed and developing economies of the world.

### TELE DENSITY: AN OVERALL PICTURE

Tele density is often used as an index to measure the extent to which the telecom industry has penetrated into the people and regions of a country (Baraka, Elwany, EL-Gamily, & EL-Gamily, 2013). The number of subscribers per 100 inhabitants is generally reckoned as the basis for measuring tele density (Gille, 1986). Tele density in India has shown an increasing trend since 2006 when it was just 12.74 out of 100 inhabitants. It shot up to 78.66 in 2012. In 2018 it touched a level as high as 93.27, after which the tele density in India has become almost static (Figure No.1).

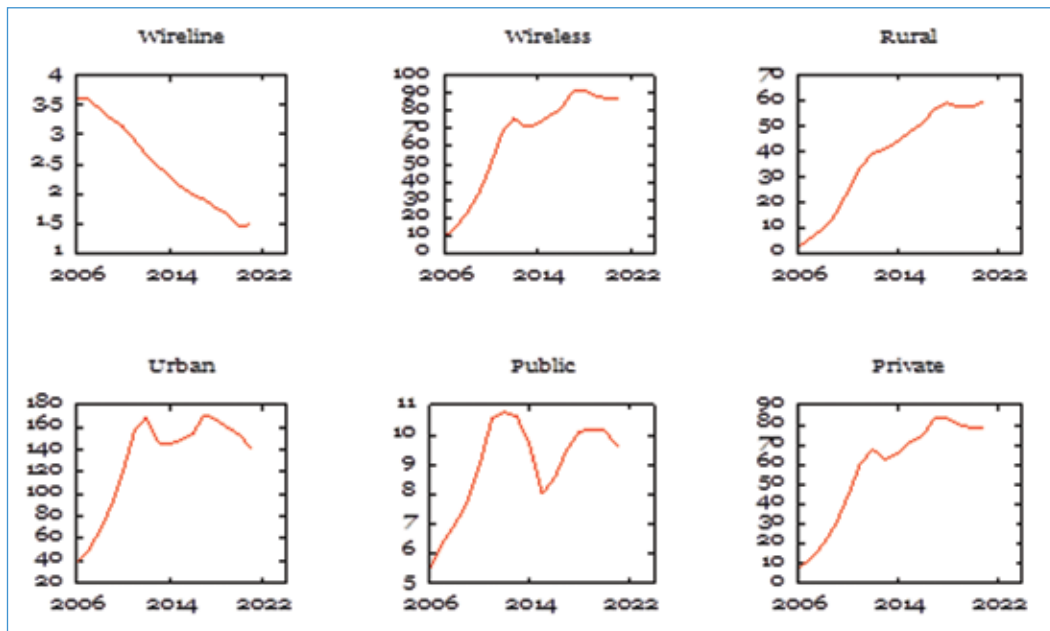
FIGURE 1  
TELE DENSITY (NO. OF SUBSCRIBERS PER 100 INHABITANTS) (2006-2021)



Source: Compiled from DoT reports

Tele density can also be decomposed into wireless/wireline density, rural/urban density and public/private density. It is unsurprising that wireless density has been increasing in every part of the world and the same is equally true for India as well. Wireline density in India has shown a sharp decline from 2006 to 2021 whereas wireless density has tremendously increased during the same period (Figure No.2). Rural density in India has been moving up although not as steep as in the case of wireless density. However, urban density shot up from 2006 to 2010; thereafter it has shown some kind of oscillations. Public tele density (tele density due to public sector companies) has shown a serious downward trend in recent times in India while private tele density has registered a sharp rise.

FIGURE 2  
TELEDENSITY: WIRELINE/WIRELESS, RURAL/URBAN, PUBLIC/PRIVATE



Source: Compiled from DoT reports

Moving on to internet density, it seems the picture runs contrary to the tele density in India. Here, the internet density connotes internet subscribers per 100 inhabitants. In 2013, the total internet density in India stood at just 13.45 per cent and by 2021 it moved to 60.73 per cent, registering almost a six times increase within a relatively short span of eight years. Urban internet density has recorded a jump from 49.07 per cent in 2015 to 107.30 per cent in 2021 while rural internet density has just moved from 12.89 per cent in 2015 to 36.24 per cent in 2021 (Table No.1). This clearly brings

out the existing disparity in the spread of internet density between the urban and rural areas in India which requires immediate attention from the telecom policymakers and governments.

TABLE 1  
INTERNET DENSITY (INTERNET SUBSCRIBERS PER 100 INHABITANTS)

Year	Total	Urban	Rural
2013	13.45	NA	NA
2014	20.29	NA	NA
2015	24.09	49.07	12.89
2016	26.98	58.28	12.80
2017	32.86	70.83	15.49
2018	38.02	84.74	16.41
2019	48.48	97.94	25.36
2020	55.12	99.12	32.24
2021	60.73	107.30	36.24

Source: Compiled from DoT reports

INTERSTATE COMPARISON OF TELE DENSITY IN INDIA

The trend in total tele density in four selected states viz. Assam, Gujarat, Kerala and Punjab appears quite interesting. Needless to say that Assam has been registering a poor tele density compared to the other three States. Kerala and Punjab have almost moved at the same rate in the progress of tele density in India. Starting with almost at the same level in 2008, Punjab went ahead of Kerala during the period 2011 to 2020, but in 2021, Kerala has gone ahead of Punjab in tele density (Figure No 3).

FIGURE 3  
TOTAL TELEDENSITY (PER 100 INHABITANTS)



Source: Compiled from DoT reports

Having observed the trend in total tele density in the

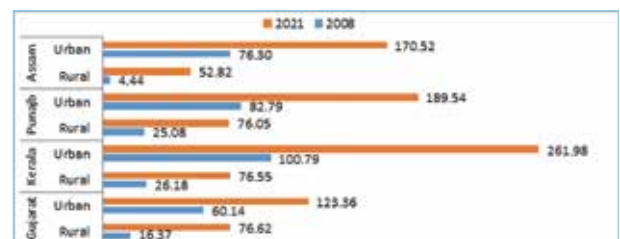
selected states, now we move on to the growth in wireless/wireline, rural/urban and public/private tele density. Indeed, the wireline tele density has shown remarkable increase in all the selected states. Punjab and Kerala have made tremendous improvement in wireless tele density having increased their tally from 41.87 percent and 34.51 per cent respectively in 2008 to 123.04 percent and 126.06 per cent in 2021 (Figure No.4). It clearly shows that there exists regional disparity in wireless tele density in India.

FIGURE 4  
TOTAL TELE DENSITY (WIRELESS/WIRLINE) IN SELECTED STATES (PER 100 INHABITANTS)



In the case of Rural/Urban the tele density, we find that Assam has had much difference between the rural and urban areas, both in 2008 and 2021. For instance, in 2008 rural tele density in Assam stood at 4.44 per cent compared to the urban tele density of 76.30 per cent. By 2021, Assam could increase its urban tele density to 170.52 per cent whereas it increased its rural tele density to just 76.30 per cent (Figure 5). Coming to Punjab, it could be seen that both the rural and urban tele density showed remarkable changes. In the case of Kerala, it appears that urban tele density has shown a big jump from 100.79 in 2008 to 261.98 in 2021. It is noticeable that among the four states under consideration, Kerala has the highest urban tele density.

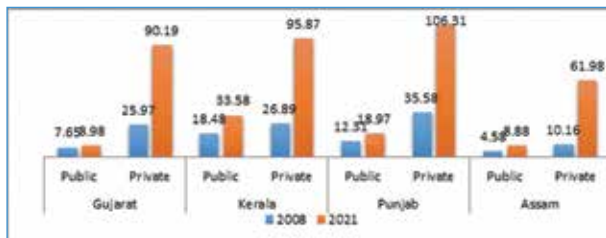
FIGURE 5  
TOTAL TELEDENSITY (RURAL/URBAN) IN SELECTED STATES (PER 100 INHABITANTS)



Turning to private/public wise tele density, it could be observed that by 2021 the private tele density in all four selected States has shown remarkable improvement. Although the largest improvement in private tele density has been shown by Punjab, the performance of Gujarat deserves special attention (Figure No.6).

FIGURE 6

TOTAL TELEDENSITY (PRIVATE/PUBLIC) IN SELECTED STATES (PER 100 INHABITANTS)

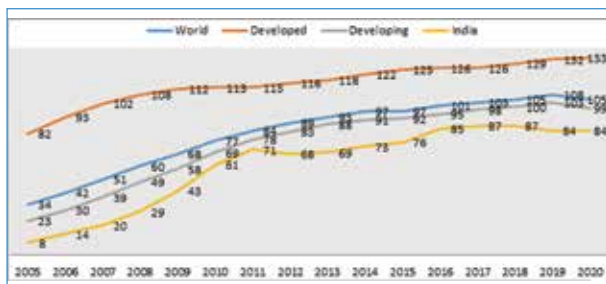


INTERNATIONAL COMPARISON

Having analysed the tele density across selected States, now it is imperative to look into India’s position at the international level in respect of the two main indicators, tele density and internet density, of telecom infrastructure development and progress. Here, we intend to make a broad comparison incorporating the position at the world level that is how far on average world has been progressing in respect of both the indicators and the achievement of developed and developing economies. Focusing first on tele density, we may find it quite unsurprising that in terms of mobile tele density developed economies have always been ahead of developing economies. In 2005, for instance, in developing economies 23 were mobile subscriptions per 100 inhabitants whereas in the developed world it was 82 (Figure No.7). However, in 2011, the difference between the developed and developing world started narrowing down, although the still developed region has enjoyed an edge over the developing world. But what worries us is that India has not been able to keep pace with either the world level or the developed world level in the case of attaining mobile tele density. In 2011, the difference got narrowed down as India increased its mobile-cellular subscription per 100 inhabitants to 71 from a level as low as 8 in 2005. Although the rate slightly slipped down to low levels in the succeeding years, recently it has again picked up showing that in the imminent future it is likely that India may catch up with the density accomplished by the developed countries of the world.

FIGURE 7

MOBILE-CELLULAR SUBSCRIPTIONS PER 100 INHABITANTS INTERNATIONAL COMPARISONS

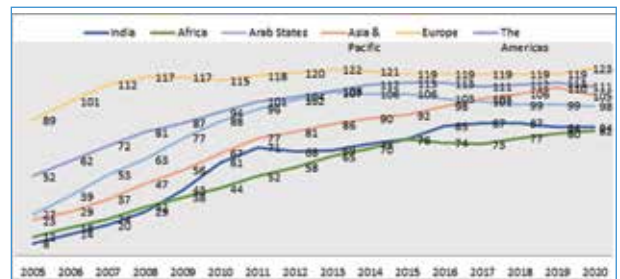


Having made a comparison with the developed and

developing regions, now the task is to have a comparative analysis of India’s position with that of Africa, Arab States, Asia & Pacific, Europe and the US (Figure No.8). It is obvious that Europe has had hegemony over the others in respect of the tele density measured in terms of mobile-cellular subscriptions per 100 inhabitants. Obviously, India has always been behind Africa, Arab States, Asia & Pacific, Europe and the US. That said, now scope for comparison does exist only between Africa and India. It is curious to note that in 2005, even India was behind Africa in the case of mobile-cellular penetration. Things got reversed only in 2008 when India’s tele density started showing signs of improvement over that of Africa. Although in 2017, India surpassed Africa in the case of mobile penetration still both nations move neck to neck with a slight variation in certain instances.

FIGURE 8

MOBILE-CELLULAR SUBSCRIPTIONS PER 100 INHABITANTS INTERNATIONAL COMPARISONS



When it comes to the case of an active mobile broadband subscription, it can be seen that a huge gap has been prevailing between the developed countries and the developing nations of the world. India has been able to increase the number of active mobile broadband subscriptions to 47 per 100 inhabitants in 2019 from a level as low as just 2 per 100 inhabitants in 2011 (Figure No.9). It shows that still we have to long way in ensuring active mobile broadband to a relatively huge number of Indians, and it is hoped with the rolling out of 5G, the goal of making mobile broadband accessible to most Indians may become a reality.

FIGURE 9

ACTIVE MOBILE BROADBAND SUBSCRIPTIONS PER 100 INHABITANTS INTERNATIONAL COMPARISONS



## Tele density can also be decomposed into wireless/wireline density, rural/urban density and public/private density

### CONCLUSION

It is true that increasing tele density and broadband density continues to be important for accelerating the rate of growth of an economy. This assumes greater significance at a time when the information and communication technology and its associated developments like Internet of Things (IoT), Artificial Intelligence etc. have started becoming the engines of growth. At this juncture it seems pertinent to look at where we actually stand in respect of accessing and using these facilities. Although we have moved ahead in the case of tele density, we have not been fully successful in ensuring internet connectivity to the people as required. It is hoped that with 5G becoming a reality, most of the hurdles in the way of making India connected through internet will be addressed. Surely, the 'Amrit Kaal' will pave the way for this. **MA**

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# PRESENT STATE OF INTEGRATED REPORTING DISCLOSURE PRACTICES IN INDIAN TELECOM INDUSTRY



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## Abstract

*Integrated reporting (IR) provides a wide range of highly informative and analytical value to stakeholders like investors etc regarding value creation in the short, medium and long run. A study was conducted with a view to examine the adoption level of IR practices in Indian telecom industry and find out the relation between profitability of telecom companies and adoption level of IR. No relationship is found between profitability and IR adoption in Indian telecom sector as Reliance Jio is a profit making company but did not adopt IR practices and Bharti Airtel adopted IR practices even after having losses. Vodafone Idea is a company which was suggested by SEBI to adopt IR practices but did not adopt till FY 2021-22. BSNL has not adopted IR practices as it is a Government owned non-listed company which was not suggested by SEBI to adopt IR practices. It is suggested that SEBI should formulate IR framework in Indian perspective by considering India's local reporting needs.*

## PROLOGUE

**S**ustainability and transparency issues are creating rigidity in the minds of stakeholders and management as stakeholders want to know how business operates and about potential risk and its impact on business.. This need of stakeholders is not satisfied by financial information disclosures as it is limited to financial data in quantitative form. Qualitative information, which is non-financial in nature provides details about organization's outlook. IR provides a wide range of highly informative and analytical value to stakeholders like investors etc regarding how an organization creates value in the short, medium and long run. The structure of IR framework may be understood from the following Table 1.

TABLE 1: STRUCTURE OF IR FRAMEWORK

Fundamental Concepts	Guiding Principles	Content Elements
Value creation for the organisation and for others	Strategic focus and future orientation, connectivity of information, stakeholders relationship	Organisational overview and external environment, governance, business model, risks and opportunities
Capitals	Materiality, conciseness, reliability and completeness	Strategy and resource allocation, performance, outlook
Value creation process	Consistency and comparability	Basis of preparation and presentation, general reporting guidance

Prior to IR concept, organisations presented non-financial information in an unorganised way at different places of annual report. Thus the various stakeholders faced problem for conciseness and summarising the relevant information due to unorganised way as every annual report has many contents running to hundreds of pages. South Africa adopted IR practices on mandatory basis and the rest of the world except South Africa is following IR practices on voluntary basis. The Securities and Exchange Board of India (SEBI) stated that in recent scenario an investor is in need to have financial and non-financial information to contemplate about his investment decision making. SEBI circular dated 7<sup>th</sup> Feb, 2017 stated that top 500 listed companies in India may adopt IR practices from financial year (FY) 2017-18 on voluntary basis according to the IR framework issued by IIRC. As a result of SEBI circular, more companies adopted IR practices on voluntary basis and changed the name of annual report as integrated annual report. Few companies are providing separate integrated report and some companies are including integrated report in their annual report separately or under management discussion and analysis. As five years has been completed since the adoption of IR practices to the best of our knowledge no study has been conducted on telecom sector for check adoption level of IR practices and therefore there is curiosity to examine the adoption level of IR practice as voluntary disclosure in telecom sector.

## REVIEW OF LITERATURE

Oyarce (2022) found that the IR now a days is established as sound global trend with rapid growth since the year 2011 and exists in most parts of the world. Contradiction with the format of IR as suggested by

IIRC was found because IR framework claims that it is simple and seeing organization as a whole but it is also claimed by others that possibilities exist to make ones' own interpretation in IR format.

According to Piesiewicz *et al.* (2021) the major problem of IR practices was to establish link between business model and strategies, risks, opportunities and performance. It revealed that significant difference in IR disclosure practices between energy and other non-energy companies as energy sector published more qualitative IR as compared to other companies..

Soriya & Rastogi (2021) found that the top management may take steps like educating the employee and changing internal mechanism to face IR challenges. They suggested that managements should implement IR in their business strategies and should also care about opportunity cost and ESG (environmental, social and governance) issues associated with IR.

Dey (2020) found that Banks which adopted IR have higher value of firm and with larger board. Higher representation of females in board and higher number of independent directors led to more IR disclosure practices and no relationship was found in IR disclosure practices and stock liquidity.

Kumawat *et al.* (2020) found that the level of IR disclosures in selected companies are increasing and companies are providing more information as compared to previous annual reports. Due to voluntary adoption and with no mandatory requirement, only 19 companies out of 50 were found to have adopted the IR as per IIRC framework. It was concluded that IR has no value relevance for companies' market value.

Ivan (2018) found that companies presented their annual reports by incorporating the disclosures related on CG, social and environment responsibility aspects. All were also trying to align the disclosures related to stakeholders by way of responsibility on issues like shareholders, society, employees and environment etc.

Bhutani & Tyagi (2017) found IR to be important in the sphere of corporate reporting which creates value for the organisation and value creation process as reflected in IR is helpful to stakeholders for decision making. IR could bridge the reporting gap and SEBI has provided an opportunity to listed entities in India to follow IR practices on voluntarily basis.

Kumar (2017) found that value creation through IR is not possible without cost information, and therefore cost information is relevant to IR. The volume of corporate reporting is increasing but without adding any relevance or meaning to the users .

Demirel & Erol (2016) stated that IR was being adopted by large business organisations. Most IR adoption was found in European region and financial services sector

published more IR. The indifference in IR from company to company was found to be due to the new concept, background and framework of IR.

### RESEARCH METHODOLOGY

The study was conducted with the aim to examine the adoption level of IR practices in Indian telecom industry and find out the relation between profitability of telecom companies and adoption level of IR. Therefore, following research methodology was adopted to achieve the objectives.

#### Sample Size and Selection Criteria

Top four Indian telecom companies which have 99.72 per cent % market share of wireless subscribers collectively on 30<sup>th</sup> Nov 2021, namely Reliance Jio Infocomm Ltd (Reliance Jio), Bharti Airtel Ltd (Bharti Airtel), Vodafone Idea Ltd (Vodafone Idea) and Bharat Sanchar Nigam Ltd (BSNL) have been selected for study purpose as may be seen in Table 2.

TABLE 2 WIRELESS SUBSCRIBERS SHARE IN TELECOM SECTOR COMPANIES

S.No.	Name of Company	Market Share	Ownership
1.	Reliance Jio Infocomm Limited	36.71 per cent	Private
2.	Bharti Airtel Limited	30.43 per cent	Private
3.	Vodafone Idea Limited	22.88 per cent	Private
4.	Bharat Sanchar Nigam Limited	9.70 per cent	Public
5.	Others (MTNL & R. Com)	.28 per cent	Mixed

#### Time Period, Data Collection and Research Method

To examine the IR practices of telecom companies, a period of four FYs 2018-19, 2019-20, 2020-21 and 2021-22 was taken into consideration. Various research papers and market share data released by Telecom Regulatory Authority of India (TRAI) were collected from the websites. Annual Integrated Reports or Annual Reports of telecom companies were collected from the website of the companies. A checklist was prepared on the basis of IR framework to examine the adoption level of IR practices in select telecom companies.

### STATUS OF INTEGRATED REPORTING

A check list of 22 aspects was prepared on the basis

of IR framework issued by IIRC. Company wise status of IR practices is as under.

#### IR Practices of BSNL

After examining the annual reports of BSNL for the FYs 2018-19 to 2021-22, it was found that BSNL had not adopted IR practices. It may be due to the fact that BSNL is government owned non listed company and SEBI suggested top 500 listed companies only to follow IR practices voluntarily, while BSNL in addition to normal disclosures, disclosed few other reporting as mandated for government companies.

#### IR Practices of Vodafone Idea

As per the data released by National Stock Exchange on 31<sup>st</sup> March 2020, Vodafone Idea was the 193<sup>rd</sup> company among top 500 listed companies on the basis of market capitalisation and therefore suggestion of SEBI to follow IR practices was applicable to Vodafone Idea. However Vodafone Idea had not followed IR practices during the FYs 2018-19 to 2021-22. After analysing the annual report, it was found that Vodafone Idea had not disclosed the elements of IR framework such as reporting of capital etc at any place even in unorganised way.

#### IR Practices of Bharti Airtel

According to Table 3, Bharti Airtel disclosed information relating to 15 aspects /parameters during the FYs 2018-19 and 2019-20 and 19 parameters during the FYs 2020-21 and 2021-22 out to total 22 parameters. Therefore, Bharti Airtel has been adopting IR practices with positive trend and main issue of connectivity of information is found in the reports of FYs 2018-19 and 2019-20 and resolved in FYs 2020-21 and 2021-22 by providing connectivity information. In the present scenario, it is challenge for the organizations to establish sound relationship with stakeholders and to convert this challenge into opportunity, Bharti Airtel in all select FYs formulated a stakeholders relationship committee as per section 178 of Companies Act, 2013. Bharti Airtel disclosed its detailed integrated strategy for value creation and explained in understandable manner how Bharti Airtel creates value with help of six capitals provided in IR framework. Some content elements like organization overview etc are required under other reporting requirements like BRR etc and disclosed accordingly as part of that report. Disclosure related to governance is found as corporate governance disclosures. Opportunity element of IR in all FYs was disclosed at different places. Materiality assessment aspect was discussed in a detailed manner and aligned with risk assessment. Strategy and resource allocation, comparability and completeness are few elements of IR framework which are not disclosed by Airtel. It can be said that, even after having huge losses, adoption of IR practices by Bharti

Airtel shows its consciousness towards IR practices.

TABLE 3 IR DISCLOSURES OF BHARTI AIRTEL

No.	Content Elements of IR	2018-19	2019-20	2020-21	2021-22
1	Stakeholders Relationship	✓	✓	✓	✓
2	Materiality Assessment	✓	✓	✓	✓
3	Risk Assessment	✓	✓	✓	✓
4	Connectivity of Information	×	×	✓	✓
5	Value Creation	✓	✓	✓	✓
6	Financial Capital	✓	✓	✓	✓
7	Manufacturing Capital	✓	✓	✓	✓
8	Natural Capital	✓	✓	✓	✓
9	Human Capital	✓	✓	✓	✓
10	Social Capital	✓	✓	✓	✓
11	Intellectual Capital	✓	✓	✓	✓
12	Organization Overview	✓	✓	✓	✓
13	Governance	✓	✓	✓	✓
14	Business Model	×	×	✓	✓
15	Opportunities	×	×	✓	✓
16	Strategy & Resource Allocat.	×	×	×	×
17	Performance	✓	✓	✓	✓
18	Reporting Policies	✓	✓	✓	✓
19	Conciseness	×	×	✓	✓
20	Completeness	×	×	×	×
21	Consistency	✓	✓	✓	✓
22	Comparability	×	×	×	×
<b>Total</b>		<b>15</b>	<b>15</b>	<b>19</b>	<b>19</b>

### IR Practices of Reliance Jio

Reliance Jio has not adopted IR practices till now. It may be a claim that Reliance Jio is not a listed company and it works under the control of Reliance India Ltd. Annual reports of Reliance Jio were also examined to check the content elements of IR framework at different places in an unorganized manner, but no content element of IR except stakeholders relationship was found in the annual reports of Reliance Jio.

It is really disappointing to know that the only profit-making telecom company of India, Reliance Jio has not adopted IR practices. It cannot make an excuse that it was not a listed company and SEBI through its circular recommended top 500 listed companies to adopt IR disclosure norms. Because, SEBI expected adoption of IR practices by top 500 companies voluntarily and all other companies like Reliance Jio as leading company of its sector may also follow

IR practices voluntarily. Therefore, it is suggested that Reliance Jio should adopt IR practices voluntarily without any legal requirement.

### CONCLUDING REMARKS

No relationship is found between profitability of Indian telecom companies and IR adoption level because only Reliance Jio generated profits in the Indian telecom industry and BSNL, Vodafone Idea and Bharti Airtel suffered losses. However

Bharti Airtel adopted IR practices and changed the name its annual report to integrated annual report. Although the IR practices of Airtel is not fully as per IR framework issued by IIRC as suggested by SEBI it adopted major IR framework and only few elements of framework such as strategy and resource allocation, completeness and comparability had not been adopted. Therefore Bharti Airtel should work on to disclose these also. BSNL is a government owned non-listed company in telecom industry and SEBI did not recommend non listed companies to follow IR practices but it is suggested that BSNL should follow IR practices on voluntary basis because news from various sources indicate that there may be a possibility to throw open BSNL to the private sector. Another reason is that if SEBI or other regulatory authority for companies like BSNL etc will introduce IR practices then it may become problematic to adopt IR practices suddenly. Vodafone Idea may be termed as gross violator of SEBI's suggestion on IR practices because it has not adopted IR practices even though it ranked as 193<sup>rd</sup> in the 500 top listed companies based on market capitalization. It is suggested that Vodafone Idea should adopt IR disclosures immediately from the FY 2022-23. Reliance Jio is a leading company based on market share and also the only profit generating company in the Indian telecom industry. Therefore, it is suggested that Reliance Jio should adopt IR practices though it is a non-listed company because IR practices show how a company creates value to stakeholders. Otherwise, SEBI should conduct a survey to find whether or not its circular is adhered to by Indian companies and also issue further directions on IR practices. SEBI should also work on to formulate IR framework in the Indian perspective by considering India's local reporting needs. **MA**

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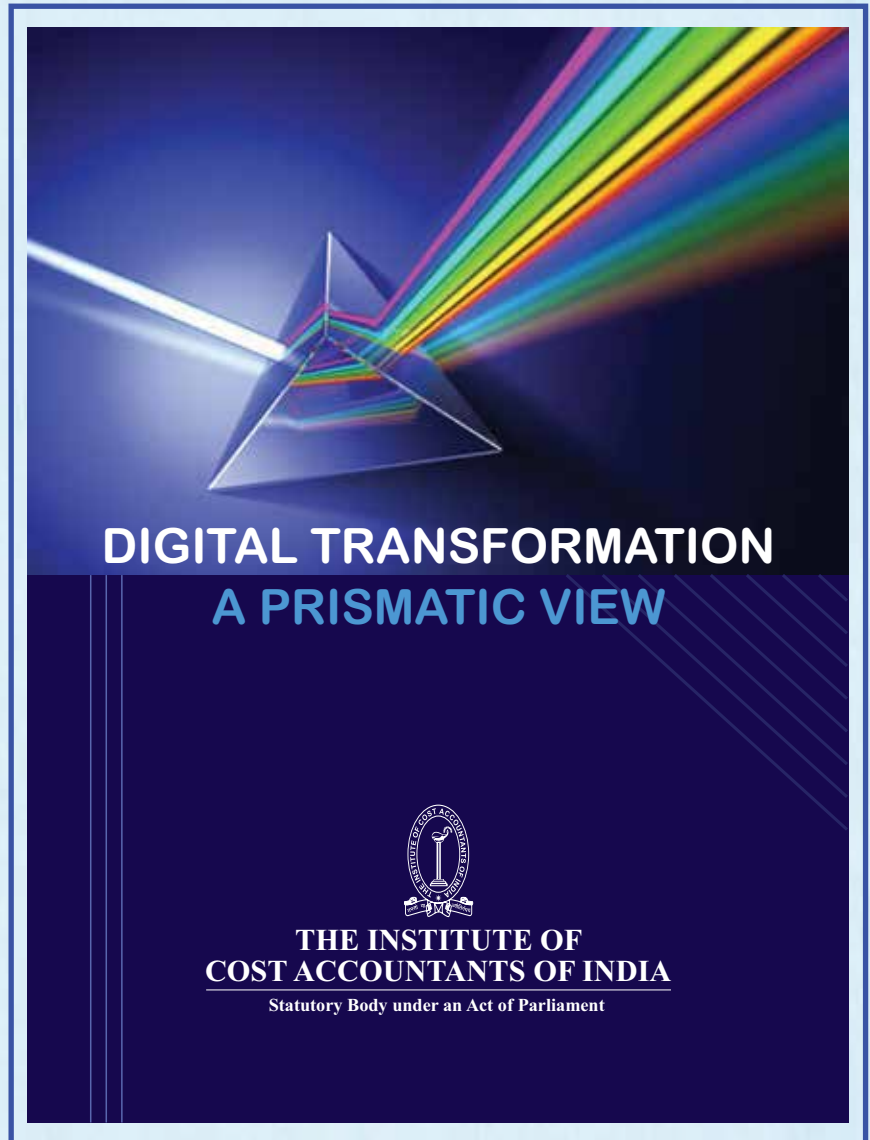
# DIGITAL TRANSFORMATION A PRISMATIC VIEW

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## DIGITAL TRANSFORMATION WITH INTELLIGENT ROBOTIC PROCESS AUTOMATION (RPA)



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### Introduction – Evolution of Automation

**H**istorians could trace the use of waterwheels by Greeks and Romans for lifting water from lakes, rivers, and other water bodies way back in the first century BC, albeit the actual date could not be confirmed. Long thereafter during 9th century AD mechanical windmills were reported to be made by the Persians for grinding grains. According to Nathan Bong,

an automation engineer of Canada, these are regarded as the first few instances of automation. He has supported his comment by quoting a publication of NASA<sup>1</sup> On a hindsight these may be regarded as automation in the simplest form because the advanced instances of automation in present era Industry 4.0 cannot and should not even be compared.

Such a process of innovations for automation continued to evolve. During the first industrial revolution between 17th to 18th century many instances of automation happened with mechanical applications driven by wind and water energy. The first ever complete process of industrial automation is said to be brought by Oliver Evans when he created a flour mill which could run automatically and continuously. During the second industrial revolution electricity helped hundreds of automations with more versatilities which played larger roles for society by increased speed of output generation, productivity, safety, quality, and convenience. With the advent of computer science integration of software with machines' operating systems brought in further innovations and ensured higher levels of controls in the process automation.

Through the continued process of evolution present day

*Image Source:* [https://en.compubase.net/RPA-Robotic-Process-Automation-Welcome-Page\\_a481.html](https://en.compubase.net/RPA-Robotic-Process-Automation-Welcome-Page_a481.html)

industrial revolution saw advanced levels of automation by integration of four disciplines of engineering, viz., Mechanical, Controls, Computers and Electronics, which is known as Mechatronics<sup>2</sup>. It reached automation to the overwhelming levels when mechatronics powered by cognitive technologies gave birth to Robots. The idea of a robot doing jobs induced digital technologists to deliver another variety of automation which is an integrated set of software only. It can do repetitive jobs automatically and flawlessly which even without adding any additional physical device and almost zero human intervention. In this lies the essence of Robotic Process Automation (RPA). When an entity uses multiple sets of RPAs into its working process, it considered to have created and deployed a virtual team of workforce.

Mikkel P Grover<sup>3</sup> defined in Britannica encyclopaedia in 2018 automation as, “.... application of machines to tasks performed by human beings or, increasingly, to tasks that would otherwise be impossible. .... automation generally implies the integration of machines into a self-governing system. Automation has revolutionized those areas in which it has been introduced, and there is scarcely an aspect of modern life that has been unaffected by it”. This definition objectively corroborates the drivers of automation in the aforesaid historical events of automation in previous few centuries of industrial revolution. It endowed automation with the predominant feature of reducing and/or eliminating human efforts from jobs hitherto being completely performed and delivered by human beings with the help of a self-governed system. And the second objective of automation is to perform tasks which are impossible to be accomplished by mankind. But interestingly Grover has not used the word ‘computer’ in his quoted definition.

Christian P Janssen et. al<sup>4</sup>

conducted their seminal research work (2019) by analysing the papers on human-automation interaction and was published in the International Journal of Human-Computer Studies during the last 50 years. They concluded that “..... over the years, automated systems have been used more frequently (1) in time-sensitive or safety-critical settings, (2) in embodied and situated systems, and (3) by non-professional users.”

Between the aforesaid definition of Grover and this research finding, in which computer has been brought into picture, the objectives of automation continued to remain common. The core essence is to transfer jobs of human beings to a self-governed system which can function by itself, without any error, and complying with the policies, systems and processes and legislated stipulations and regulations that human beings used to follow, yet getting the voluminous jobs done with higher speed, quality but at lower cost in an error-free manner. The genesis of RPA therefore lies in Bill Gate’s statement, “The first rule of technology used in a business is that automation applied to an efficient operation will magnify the efficiency.”

### Objective

This paper aims at developing a fundamental understanding about RPA and the Toolkit that is applied for its implementation. It would try to break the myth that any robotic process automation essentially needs a robotic device which is a physical product of mechatronics. It would attempt to convey that RPA is essentially an art and science of creating software architecture and digital solution designing for integrating and automating cross-functional activities even in an ERP system environment. This paper would also introduce the emerging professional field of process mining that facilitates setting objectives of any digital solution designing

and selecting the technologies that would be required for the same while working on a RPA process.

### RPA - What and How

It should at the outset be made clear that, contrary to popular belief, robotic process automation does not involve any mechatronic instrument, device or an object like a robot or humanoid. It is just one integrated computer software embedded with the powers of both ICT and digital technologies. IBM<sup>5</sup> has defined Robotic Process Automation (RPA) as “....software robotics, uses automation technologies to mimic back-office tasks of human workers, such as extracting data, filling in forms, moving files, et cetera. It combines APIs and user interface (UI) interactions to integrate and perform repetitive tasks between enterprise and productivity applications. By deploying scripts which emulate human processes, RPA tools complete autonomous execution of various activities and transactions across unrelated software systems.” This definition has been further elucidated by two short examples in a subsequent section.

RPA as a technological toolkit for workflow process automation is heavily dependent on its predecessor technologies. That is why it is commonly said that RPA in its true form emerged around the year 2000, i. e., just about two decades before as compared Arthur Samuel’s discovery of Machine Learning in 1959. It necessitated adoption of:

- ⊙ **Cognitive Technologies** like Artificial Intelligence (AI) for doing jobs that need human beings’ typical cognitive skills which can be emulated using digital technologies. This ability helps the system to recognise physical figures, images, speeches, etc.
- ⊙ **Machine Learning (ML)** for learning more about data the way human beings



learn, and translation of texts from different languages and appropriately making summaries of the same to be applied for automation,

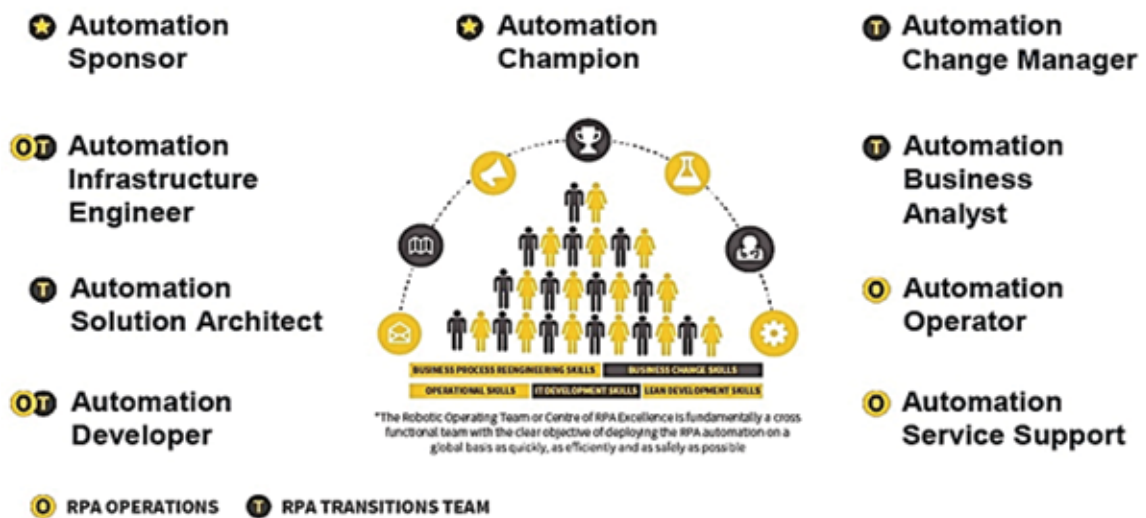
- ⊙ **Screen Scrapping** using optical character recognition tools for extracting data from changing web pages, digitalised documents, etc., and
- ⊙ **Natural Language Processing or NLP** as a branch of AI to build in the capability in a computer to recognise and

understand text and spoken language or speech with as much precision as a human being can. In a reverse process NLP can convert something written or generated by the computer in structured language into voiced out speech. A simpler version of it is experienced, when money received through a UPI payment process, from a simple device confirming through a voiced message the exact amount of money

received by the system.

Thus, RPA can collectively be called as a ‘Toolkit of Software’. In the advanced stage of intelligent RPA another higher level of cognitive technology is used which is known as:

- ⊙ **Sentiment Analyses (SA)** which IBM<sup>6</sup> has defined in a simple way as efforts made by a digitally powered device to “... *extract subjective qualities—attitudes, emotions, sarcasm, confusion, suspicion - from text.*”



Source: <https://www.auxis.com/blog/rpa-business-analyst>

The above graphic explains various aspects of the RPA solution designing process by applications of the Toolkit. The solution would be crafted by contributions of many experts. They would combine interdisciplinary knowledge of advanced ICT and digital technologies, for multipurpose work automation with in-built intelligence and cognitive skills. The question can come about the role of AI in RPA when a physical device like a robot or a humanoid is absent in the Toolkit.

Automation as an innovation was substantially achieved with applications of computers and mechatronics even before the onset of Industry 4.0. Digital scientists took over the baton and struggled

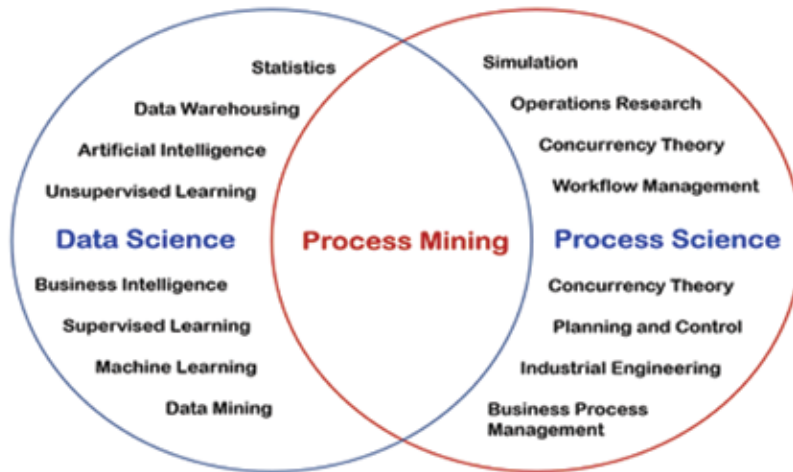
for making automation an intelligent process so that tasks that require human intelligence can also be taken over by computing systems for avoiding human interventions and thus breaks in the automated chain of workflow. Such a necessity was more felt for automation of tasks of service deliveries like in BFSI and FinTech sectors, eCommerce, governmental services, academia, research, and social media.

### Process Mining

One of the important tasks before deciding to deploy RPA Toolkit for cross-functional business process automation with more intelligent capabilities embedded in the entire system is ‘Process

Mining. This is developing as an important professional discipline which can successfully work at the intersection of ‘Process Science’ and ‘Data Science’ to help decision making execution with optimised resources. It helps to rediscover and know in depth the existing systems, processes and tasks which are presently being performed by the ERP systems with multiple points of human interventions that need to be automated to derive benefits with reduced chances of error, increased speed, and power of analyses. It also helps in identification of process events and logs, modelling of process data and conformance checking that are essential to ensure compliance of related policies, rules, regulations and

meeting financial obligations to government agencies.



Source: Recreated by author with ideas from [https://link.springer.com/chapter/10.1007/978-3-031-08848-3\\_1](https://link.springer.com/chapter/10.1007/978-3-031-08848-3_1)

The above graphic aims to convey that process mining takes place at the intersection of ‘Data Science’ and Process Science. Various sub-areas of work, included in the two spheres, indicate that professionals who wish to engage in this mining activity would require skills and competencies in:

- ⊙ Understanding business insights and nuances of conducting day to day operations,
- ⊙ Appreciating the pain points of an entity’s business activities including for cross functional collaboration and coordination,
- ⊙ Business process consulting,
- ⊙ Communication and problem solving,
- ⊙ Ensuring effective applications of cognitive technologies for value addition,
- ⊙ Data base management and data analytics, etc.

Therefore, process mining is to be done with a multi-disciplinary approach. RAGE analyses can successfully be applied for process mining to ensure effective and purposeful deployment of the intelligent RPA Toolkit. The analyses

can be done in the following steps:

- ⊙ **Required:** All support services that are required to automate the present SOP in compliance with policies and statutory rules regulations, e. g., value added tax, income tax deduction at source (TDS and TCS) while making payment, other dos, don’ts, and restrictions, etc. This requirement list would also include what all new facilities are needed by management and can be created by applications of AI, ML, Screen Scrapping, SA as have been narrated above. The second set of requirement analysis would be of immense importance for entities engaged in industry sectors like FinTech, eCommerce, Healthcare, Agriculture and Agrotech etc.
- ⊙ **Available:** Identify what the existing ERP system performs without any human intervention, e.g., stoppage of supply and sales billing to a customer if the approved credit value limit exceeds because of the present billing done and so on.
- ⊙ **Gaps:** A comparative study of the lists prepared by the

above two analyses would help identifying the gaps that are to be and can be filled by the RPA Toolkit,

- ⊙ **Essential:** Analysis in this step would help prioritising the gaps to be filled up during implementation of RPA and optimisation of resource allocation during the process of implementation in tranches.

The benefits by including cognitive technologies in the RPA Toolkit would be collection, collation, and meaningful analyses of huge data, including by scrapping of documents, sentiment analyses, etc. as have been narrated above. All these in turn would help formulation of business strategies and taking decisions for effective execution at the marketplace.

### Caselets on RPA

The entire concept of RPA can be elucidated by the following caselet. Let it be assumed that a company runs an ERP system including modules for Order to Sales, Profit and Cost Centre-wise Accounting and Reporting (FI-CO), Treasury, Plant Management, etc. The reality may be that the ERP system has been configured to functions in a hybrid manner with both manual

and automated tasks, e. g., capturing of orders received from customers, invoice raising and collection accounting, generating reminder mails, etc. Moreover, between the two modules requiring cross functional inputs, customisation might have not been done for seamless integration.

Despite prevalence of ERP systems between two modules the system would operate with many human interventions due to breaks in the chain of workflow. For example,

orders received from customers and inventory management and procurement related data may be manually entered into production planning and scheduling module. Such events of manual interventions break the chain of cross-functional process workflow while creating the manufacturing schedule and queuing of orders for fulfilment by dispatches of goods from warehouses and/or manufacturing plants. The ERP system generally do not by itself have

any automatic forecasting module unless it has added with facilities for analysis of past data, study of customers' buying behaviour and so on. RPA tool kits available with service vendors who can automate the entire process.

Readers can learn more about applications of RPA from a contribution of Bernard Marr at <https://bernardmarr.com/10-amazing-examples-of-robotic-process-automation-in-practice/>



Take over repetitive tasks that employees carry out 50-60 times a day



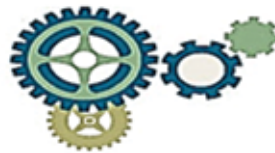
Periodic reporting, data entry and data analysis



Mass email generation, archiving, extracting



Conversion of data formats and graphics



ERP transactions



Process lists and file storage

Source: <https://www.uipath.com/blog/rpa/the-robotic-process-automation-infographic>

The next example of RPA could be for a bank's systems for receiving applications along with documents for retail consumer loan against capital assets, processing, approving, disbursement, issuing reminders for timely instalment payments, analysis of overdues and determination for defaulters for issuing legal actions. The author has explained the entire process, including integration with the eCommerce Platforms of the sellers of those items, in his article under this monthly Column of September 2022.<sup>7</sup> Support services that a bank's customer receives while using the net banking facilities through a Chatbot is also an example of RPA from the perspective of banks to avoid the customer calling their cost centre executives to get the help.

Deloitte conducted a survey in 2022 amongst about one hundred leaders

of shared service providers to assess suitability of RPA applications. The results revealed that about 22% of respondents have already implemented RPA in pilot or full scale, and 74% have planned to examine RPA as a technology within a year. In their report<sup>8</sup> Deloitte added that, *“Those who had implemented identified that RPA meets or exceeds their expectations in terms of financial benefits, and reality tends to outperform expectations even further with non-financial benefits.”*

### Benefits of RPA

Readers by now must have appreciated the RPA as a Toolkit for intelligent automation of repetitive tasks and guessed the benefits that can be derived from it. The following can be an illustrative but not comprehensive list of benefits from RPA:

- ⊙ Saving manpower and other operating resources for performing repetitive functions
- ⊙ Seamless integration of cross functional workflows,
- ⊙ Minimisation scopes and chances of human errors, frauds, compliance misses, etc.,
- ⊙ Increased efficiency with speed and higher quality of seamless and reliable service deliveries to stake holders with zero error,
- ⊙ Handling millions of customers widely spread across geographies by a centrally administered RPA solution which is a necessity for industry sectors like BFSI and FinTech, eCommerce, aviation, etc.,

- Applications of cognitive technologies and data analytics that helps in ascertaining customers' behaviour across geographies and demographic patterns, formulation of business strategies and implementation of execution tactics

In the ultimate analysis RPA helps in ensuring risk-enabled performance management when the genesis of risks could be in both internal and external business environment. According to Deloitte<sup>8</sup>, “.... relevant RPA tools, organisations can create a seamless back office by automating rule-based business processes thus allowing you to effectively deploy your more highly experienced personnel to add more value through direct customer engagement and therefore enhance customer interaction.”

### Volume of Market

Intelligent automation has now become a sought-after product group for commercial business of software giants and process consultants in the domain of digital transformation. Large corporate groups and service delivery agencies of governments and NGOs are now deploying RPA for handling voluminous but repetitive tasks with qualitative improvement, added versatility and cost-benefit trade-off. According to a recent report of Grand View Research RPA market in USA would be above USD 12 billion by around 2028 and that may register a CAGR of 32.8%. Maximum share for this would come from 'RPA as a Service' the present share of which is 61%.

There are plenty of RPA consulting firms that offer advanced and intelligent RPA Toolkits. One of the websites where readers can get updated information on this is <https://www.softwaretestinghelp.com/robotic-process-automation-tools/>. Similar such service providers are also there in India.

### Conclusion

RPA as a professional discipline is developing in Asia. In the USA and Europe its speed of applications has picked

up momentum. It is both an evolving and emerging field where solutions are to be designed with multidisciplinary approach. The author will feel happy if this article meets the first hand requirement of readers in gathering knowledge and information of robotic process automation. RPA as a subject can also be clubbed with physical mechatronic robots for applications in various industry sectors. Shall look for a similar such space to write more on the combined subject. **MA**

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# IDENTITY CHECKS & CORRECTNESS OF BANK ACCOUNT USING PENNY DROP PROCEDURE



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## Abstract

*Accuracy in identity of the person, his contact details, bank account are most essential data in any establishment to conduct any operations. These data must be collected and validated before on-boarding stage with requisite support evidence and must be maintained in the accounting system. In this fintech world there are many advancement in process to verify the correctness of the identity of the person and his bank account without major effort and time. Since the verification is done through the system there is no paper work and subsequent workflow can be smooth and reliable. Verification of identity of the person's bank account in penny drop mechanism is discussed in this write-up.*

**B**efore on-boarding a prospective vendor, customer or employee the verification of correctness of their bank account and identity is an important activity to be accomplished upfront.

- ⊙ For all user entities such as proprietary concerns, partnerships, companies, HUFs, and other forms of organisations, tax identity documents such as PAN / GSTN are the main documents relied upon to authenticate identity and for various tax compliances.
- ⊙ For individuals, besides PAN / GSTN the Aadhar id is an important document for identification.
- ⊙ For correctness of identity of respective person's bank account details, cancelled cheques are being collected to update the bank account details and IFSC code.

Businesses can instantly verify their prospective customers' / vendors' / employees' bank account validity by carrying out a simple penny drop procedure.

## PENNY DROP VERIFICATION

This is a form of bank account validation in which Rs. 1 (hence, the name), is transferred into the prospect's bank account to identify whether the transaction is successful or failed.

This will be beneficial for businesses as it identifies any fault before initiating regular business funds transfer to the person's bank account.

## How Does it work

- ⊙ The Penny Drop process involves the following steps :
- ⊙ The prospective customer / vendor / employee provides his cancelled cheque to identify bank account number and IFSC code
- ⊙ The Penny Drop function is

effected through the service provider's dashboard or penny drop API. (Application Programming Interface)

- ⊙ The service provider's system drops a penny (INR 1) into the prospective customer / vendor / employee's bank account.
- ⊙ If the bank account is valid and the amount INR 1 is credited to the account, the Penny Drop procedure succeeds.
- ⊙ If the bank account is closed or invalid the amount INR 1 is not able to be credited to the account and the Penny Drop fails
- ⊙ After a successful Penny Drop transaction, the verified account status and beneficiary name are returned to validate the master data.
- ⊙ However, if the bank account verification fails, the account status and the reason for failure are returned--- it may be that account number is incorrect or wrong account type, invalid

IFSC code, mismatch in name, dormant or frozen account due to inactivity or non payment of dues.

- ⊙ Failed transactions must be rechecked with documents received from the prospect and master data in the system. Requisite corrective actions should be taken before deciding whether to onboard the prospect or not.
- ⊙ Further the prospective customers / vendors / employees name can be compared with the beneficiary name returned from the bank against the identity details provided in the application form to authenticate correctness of identity.

Bank account details verification which usually takes days to complete manually, is automated using Penny Drop APIs.

These APIs enable every business to instantly and securely verify the bank account details of customers before proceeding to offer / accept services with the prospect.

Implementing these APIs is seamless and can be easily integrated into various KYC regulatory procedures in a secure authentication mode.

Bank account verification is very much necessary for all businesses to restrain from facing unnecessary losses due to usage of wrong bank accounts in fund transfers.

Penny Drop procedure also plays a vital role in the identification of fraudulent fund transfer wherein the bank account belongs to a fraudster is used instead of the actual beneficiary account while trying to defraud the business funds.

The Penny Drop bank account verification procedure must also be followed as the initial step before carrying out e-mandates that would require the businesses to transfer

**Penny Drop  
test speeds up  
verification with  
accuracy and  
absorbs large  
volume verification  
easily**

money periodically. This can aid in preventing uncalled-for losses for the firm in the fund transfer to wrong bank accounts.

### THE NEED FOR SUCH VERIFICATION

It is important for businesses to verify their prospective vendor or Employee Bank account for the following reasons :

- ⊙ To ensure that the beneficiary bank account exists
- ⊙ To find out if the bank account belongs to the same person or not (ie whether the account holder's name matches with name in the onboarding application)
- ⊙ To ensure that the bank account is active, i.e., the account is not frozen/closed and is accepting credits

Before onboarding a person, businesses can easily verify the authenticity of the person's bank accounts prior to initiating a money transfer with a Penny Drop. This method provides precise results regarding the bank account ownership and that the account belongs to the same person who is signing up for their services.

### Simplicity in Penny Drop Verification

Penny drop verification is a convenient method for businesses of all sizes to verify their clients' bank accounts. With the help of Penny Drop, they can verify bank account details to prevent the risk of large-scale losses in fund transfers.

Employee salary transfers, pension transfers, marketing team allowance reimbursement transfers, insurance company's claim transfers, mutual fund members redemption proceeds transfers, PF withdrawals and many other large volume remittance transactions can be initiated after a Penny Drop verification. They can verify the retrieved account details against the KYC proofs/bank account details submitted by the client/member / employee so that monetary transactions happen only between the business and the intended recipient's bank account.

In addition to verifying the details of the person, this method also aids in cutting down fraud through identity thefts. With just a Penny Drop, organizations can take a significant step in eliminating heavy losses due to faulty money transfers and its consequential accounting, administrative actions and audit trail maintenance. Penny Drop test speeds up verification with accuracy and absorbs large volume verification easily.

### CONCLUSION

By transferring a nominal amount, say ₹1, to the bank account provided by the user one can receive the confirmation for the fund transfer along with the user's details from the transferee bank. The said amount remitted successfully may be adjusted in the actual amount to be remitted subsequently.

Penny Drop can be integrated with KYC / prospective onboarding process, making identity and bank account verification convenient for both the business and its connects.

This process can minimise identity thefts, enabling businesses to secure their large-volume monetary transactions with customers / vendors / employees. MA

# MIMETIC ISOMORPHISM: A TOOL FOR ORGANIZATIONAL LEGITIMACY

## Abstract

*Institutional theory offers a basic framework for explicating different forms of isomorphism. Firms struggle to strike a balance between imitation and differentiation, so as to gain legitimacy in the eyes of the stakeholders. Mimetic isomorphism is the result of interactions of firms in an industry and shift firms towards acceptable behaviors, following presupposed norms and ultimately gain legitimacy in the eyes of the stakeholders, with avoidance of negative consequences.*



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## INTRODUCTION

Organizational identity has been approached as cornerstone for survival strategy. Literature has tried to conceptualize the organizational identity by focusing either on distinctive organizational characteristics or on similarities among its peer. Organizational identity essentially reflects the subjective judgments of the organization in relation to its respective organizations in peer set (Dutton & Dukerich, 1994).

Organizations exhibit gestures that resemblance to other organizations in the particular field. At the same time, organizations tend to reveal their differentiating features so as

to distinguish themselves from the rest of peer members and adhering to distinguishing individual characteristics in a particular field. This brings in an incongruous nature of organizational identity (Lonsbury and Glynn, 2001). Further, Brunninge (2005) points out that “inherent tensions in the interplay of self-understanding (on the organizational level) and forces pushing towards isomorphism (field level)”.

Organizations undergo a challenge of working through the nexus of organizational identity construction dynamics, industry imposed institutional pressures which are directing organizations to share identity features/resemble with peer and managing a unique identity to

gain strategic advantage from its competitors.

## FORCES SHAPING ORGANIZATIONS IN INDUSTRY

Literature on institutional theory attempts to understand how organizational identity develops as a response to challenges and variations as per requirements of institutional environment (Scott, 1991). Such response ensures survival (Palmer & Biggart, 2002). With time, such responses manifest institutional isomorphism.

DiMaggio and Powell (1983) discuss institutional isomorphism as “the process by which organizations, such as universities, become increasingly homogeneous

through their interactions with one another and with third parties". Institutional theory suggest that organizations aspire to fit within a certain organizational field, which promotes the emergence of significant similarities across organizations carrying out related functions. It suggests that interaction of forces in an industry push organization to "result in homogeneous responses" (Lamb & Weiner, 2018, p. 140).

Institutional isomorphism is exhibited as three discrete forms: Coercive isomorphism, Normative isomorphism and Mimetic isomorphism. Coercive isomorphism results from institutional pressures forcing organizations to behave, as organizations hold dependency on the pressures to operate in the market. It is the result of imposition of rules and regulations by Governments and State authorities. Non confirmation to such rules might lead to punishment (Biesenthal, Clegg, Mahalingam & Sankaran, 2018). Organisations tend to comply so as to gain legitimacy (Edwards et al, 2009) and further benefits in terms of access to resources, grants etc. (Johnston, 2013)

Normative isomorphism results from pressures stemming from influences of professionalization in an organization (Tipuric, 2014). Participants of the same profession get connected through the same set of customs, traditions, skills and homogenous features over aq period of time and establish legitimacy. Such forces and pressures create significant influence on a firm, and may provide grounds for establishing whether the experiences and beliefs of individuals in an organization can be considered legitimate or not. Further, qualifications assist in achieving conformity in a given professional and organizational field (Lamb & Wiener, 2018). For example, auditing services will not be considered as legitimate if the services are not provided by certified auditors.

Organizations have a tendency to model their procedures and policies after those of successful, respectable, established and legitimate organizations. This leads us to mimetic isomorphism. Mimetic isomorphism is the consequence of uncertainties, ambiguities in the environment and lack of clarity in organizational objectives. According to George et al (2018), mimetic isomorphism is "the intentional or unintentional replication of what is perceived to be working successful in other organizations" (p. 3). In other words, the adoption of structures, processes and features by organizations so as to be perceived as being superior in the institutional environment they belong to (Huther and Krucken, 2016).

Thus, organizations tend to follow the footprints of successful and legitimate organizations by mimicking their responses and actions to environmental pressures (DiMaggio and Powell, 1983; Mizruchi and Fein, 1999). Mimetic isomorphism offers low cost access to solutions to problems. The uncertainties prevailing in the environment act as motivational force that encourage organizations to masquerade as established and successful organizations. Mimetic isomorphism can be observed as workable solution for those organizations that are tangled in environmental concerns and cannot find a solution or strategic response to their problems on their own. Thus, organisations tend to apply similar structures as those of successful and established organisations in the industry, with the belief that this would help them to operate and respond environment in similar fashion and achieve similar success. It is more likely that over time, enterprises with closely comparable core businesses will become isomorphic (Edwards et al, 2009).

### LEGITIMACY: AS A CONCEPT

Institutional theorists contend that

the consolidation of organizational legitimacy is the primary outcome of this isomorphism as the end consequence (Deephouse, 1996). The environment in which multi-national corporates operate are complex in nature and the internal organizational processes of such organizations strive to establish legitimacy. Responding to different sets of regulatory, normative and cognitive requirements lead organizations to compete for acquisition of sources and place pressure on how organization gain legitimacy (Kostova, Roth, Dacin, 2008).

Legitimacy has been considered to be linked with organizational concepts, theories like institutional theory, resource dependence theory and organizational theory. Legitimacy can be viewed as socially constructed assumption that "organizational activities are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995, p. 577). Further, organizations also develop their unique personalities even when they operate in the same organizational sector and exhibit similarities as a result of isomorphism mechanisms through response that can differentiate the organization from similar organizations (Steele & King, 2011). Multinational corporations frequently exploit their reputation as a source of legitimacy in the host nation. Further, legitimacy has been pointed as "an anchor point of a vastly expanded theoretical apparatus addressing the normative and cognitive forces that constrain, construct and empower organizational actors" (Suchman, 1995, p. 571). Legitimacy has been explicated in terms of acceptability (Knoke, 2019), being taken for granted (Carroll and Hannan, 1989), reasonableness, appropriateness and congruence (Brown, 1998).

Legitimacy is a central element that leads to adherence of expectations of social system's norms and meanings. For example, Lawrence (1998)



suggested that gaining legitimacy is synonymous of being accepted as qualified professional and member of particular profession.

Ruef and Scott (1998, p. 879) recommend that legitimacy assessment tend to restrict those that involve regulative and normative dimension. Rendtorff (2019) argued that firms must opt for legitimating assumptions to operate in market as legitimacy is a precursor of the survival of the firms. Firms cannot prosper in the market without legitimacy. Activities of firm like investment decisions, partnership with businesses, dealing with different stakeholders, sales, support from political parties etc. are all based on legitimacy.

Firms follow imitation behavior by using legitimacy framework provided by the legitimacy providers. Legitimacy providers assess the complex environment and simplify it and provide base points to organizations so that they can easily follow this in categorical form (Fiegenbaum, Hart and Schendel, 1996) and organization managers follow mimetic behavior based on these frameworks. Firm managers face the pressure either to conform to gain legitimacy or to pressure to perform to bring heterogeneity across firms.

**LEGITIMACY AS A TOOL FOR MIMETIC ISOMORPHISM**

Institutional theory provides a theoretical understanding for explaining the imitation behavior of the firm across the continuum of firms belonging to same industry. Two contradicting questions have been posed in literature i.e. “Why are there so many kinds of organizations?” and “Why is there such startling homogeneity of organizational practices?”. The theoretical lens of isomorphism bridges these two key concepts. Institutional theory asserts that institutions operate under pressure of different institutional forces that

**Mimetic isomorphism may anchor legitimacy for a firm and increases the conformity of firm in an industry**

make firms to resemble with each other so as to offer adherence to institutional environment.

Previous researches have shown that there are different ways to find who identify whom. When firm managers face ambiguous situations and are not clear with their solution they take the help of mimetic isomorphism which provides further legitimacy (Cyert and March, 1963), as in those situations legitimacy is the only way for survival of organization (Dacin, 1997; Deephouse, 1996). Literature suggest different explanations for mimetic isomorphism like being part of a network or influence of peers (Haunschild, 1993; Kraatz, 1998), common firm size (Fligstein, 1991; Haveman, 1993) high performance and successful firm performance. Companies tend to make choice of cognitive processes based framework while shaping organizational decisions. Organizations operate in similar situations and categorized their actions to create classified groups. This further influence decision like which, what and how to access resources and target markets etc. Organisations can make groups to attain legitimacy. This kind of categorization is not based on firm’s desirability but on the basis of comparison of others on same positions. Under this kind of classification, firms tend to gain legitimacy on some similar area of decision making.

Legitimacy can be generalized in the sense that endeavors of firms are executed in conformity of social norms and institutional values (Suchman, 1995; Hirsch and

Andrews, 1984). It emphasizes the importance of those who provide legitimacy framework to the firms after observing the complex environment. Legitimacy observers help the firm to adhere to socially constructed norms by classifying them into categories. Organizations tend to face complex and ambiguous environment that legitimacy providers share classification of these situations with managers at intra industry level.

**IS THERE SELECTIVE MIMETIC ISOMORPHISM?**

Pinning on mimetic isomorphism as a way to gain legitimacy, there are number of questions that require attention like: ‘Do firms imitate on selectively? Do they mimic positive outcome possibilities only and keep away from negative outcome possibilities? Do firms make commitment against their own discernment and if this is so then what will be the results?’ Answers to such questions can be addressed by going into the herd behavior model of economic literature (Bikhchandami, Hirshleifer and Welch, 1992). Mimetic isomorphism has been analysed through a number of economic models. Herding behavior also offers an explanation for mimetic isomorphism which plausibly explains the responses under ambiguous situations. Further, Barreto and Fuller (2006) suggest that consequences of mimetic isomorphism is homogeneity of firms even if the consequence of earlier imitation is negative. Forces originating from legitimacy may consider the firms towards the ineffective decisions. Prospective trade-offs between the legitimacy practices and performance leads to greater possibility of survival of firm. Henderson (1999) elaborates probability of survival as cost of performance. This suggests that legitimacy oriented imitation may lead the firm towards negative consequences if it indemnifies the assistance in future from inside or outside constituencies if firm faces

extreme negative situations. Barreto and Fuller (2006) offer herd behavior model of economics as justification of mimetic underlying mechanism based on rationality.

CONCLUSION

Isomorphism concept from institutional theory follows multifaceted approach. Mimetic isomorphism may anchor legitimacy for a firm and increases the conformity of firm in an industry. Firms are considered more acceptable and attain rational conformity to similar cognitive meanings, systems, practices and structures which are appropriate to society's meaning. Mimetic isomorphism stems from interactions of firms in same industry or field. On the other hand, firms, which divert away from acceptable behaviour and break the presuppositions, tend to face legitimacy challenges. MA

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# TIME TO INSTITUTIONALISE ARBITRATION PROFESSION

## Abstract

*This article makes a strong case for appointing a statutory body as a regulator for the arbitration profession. This will ensure a major boost to the development and growth of arbitration profession. With each day marching towards USD 5 trillion economy, continued efforts to attract of FDI investments and a push to infrastructure, a two-way regulatory framework is important for catapulting India to reach the dream destination and emerge as a favourite hub of international arbitration.*



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## INTRODUCTION

In any business transaction, there is a possibility of dispute arising due to expectations of parties not materialising or due to acts of omission or commission by either party or due to the misunderstanding of the terms and conditions of the contract. These disputes need to be resolved, in the first stage, in a spirit of give and take. However, when the parties take an unrelenting stand and wish to drag the other party to the court, there starts the beginning of travails - plethora of appeals, stay petitions, affidavits, counter-petitions, dates of hearing, adjournments, additional grounds, etc. etc. It is a long unwinding journey to seek resolution of a dispute. In the process, no one wins. Even the winner of a court battle is a big loser, in terms of money, time and energy.

Instead of resorting to court route, an easy way is carved out as an alternate dispute resolution. It is better to appoint an independent

arbitrator with mutual consent of the parties and seek resolution of the dispute. Arbitration process is largely free from delays. It is cost effective and result-oriented. This is truly a great relief.

Arbitration is ingrained in the history of India. Right from olden days, dispute resolution involved the process of arbitration. Successive Governments at the Centre have tried to frame legislations with the objective of raising the bar and make India an enviable destination for international commercial disputes, confirming to the best practices of other hubs of arbitrations, like Singapore, London, Paris, Stockholm and New York. This is certainly a laudable dream. All efforts should be made to make India a hub for International Arbitration.

### INDIA AS INTERNATIONAL ARBITRATION HUB: A DISTANT DREAM?

The dream of India being a hub of

international arbitration seems to have remained a distant dream. With each passing year, we seem to be nowhere near it. Some of our own leading businessmen, industrialists, business houses, find comfort in knocking at the door of Singapore or London for resolving their commercial disputes. This shows the extent of trust deficit in the arbitral mechanism in India.

### WHAT ARE THE REASONS?

There have been changes, amendments and clarification from time to time. Each piece of legislation or amendment has brought in its terrain further complications and confusion. Compared to the 1940 law (Arbitration Act, 1940), certainly the 1996 law (Arbitration and Conciliation Act, 1996) was an improvement. However, what is intended and what is actually implemented are totally contrary. Therefore amendments were made to the 1996 Act in 2015. As these amendments were found inadequate,

further amendments were brought in 2019 with an intention to establish the Arbitration Council of India and insertion of Eighth Schedule to the Arbitration and Conciliation Act, 1996. In the same year, the New Delhi International Arbitration Centre Act, 2019 was passed. Behind the creation of these two bodies i.e. Arbitration Council of India and the New Delhi International Arbitration Centre Act (proposed to be renamed as India International Arbitration Centre), there is a noble objective of inspiring confidence and credibility amongst the litigants of commercial disputes. However, there are still certain flaws in the system. The main reasons are:

- i. Presently, there is an overload of retired judges acting as arbitrators.
- ii. There is no statutory body acting as a regulator for systematic development and growth of arbitration profession. The two institutions, Arbitration Council of India and the New Delhi International Arbitration Centre, cannot be considered as regulators.
- iii. There is random growth of arbitral institutions having their own set of rules and regulations without any oversight by a statutory authority or regulator.
- iv. There is no requirement for continuing education programme (CEP) for updating of knowledge and skill of arbitrators.
- v. The responsibility for appointment for arbitrator is given to the Courts rather than to a statutory regulator. Courts are saddled with administrative work for appointment of arbitrator.
- vi. There is no monitoring mechanism for the

**Arbitration is ingrained in the history of India. Right from olden days, dispute resolution involved the process of arbitration**

performance of arbitrators, nor is there any mechanism for disciplinary proceedings against the erring arbitrators.

- vii. There is no system of peer review for reviewing the performance of arbitrators for further improvement of the arbitrator's competence and skill.
- viii. There is no provision for suspension, surrender, revival, termination or expulsion of an arbitrator.
- ix. There is no provision for submission of information regarding arbitration assignments – date of commencement, date of completion, fee charged, etc., on quarterly basis or annual basis to the arbitral institution or regulator.
- x. There is no provision for recognition of arbitral institutions with certain laid down criteria. Any institution, on its own, acts as an arbitral institution without any recognition from any statutory body.
- xi. There is no syllabus prescribed for appearing in examinations before entering the arbitration profession. Arbitration is a specialised field of law.
- xii. Arbitrators are not registered with any statutory regulator, although they may be a member of an arbitral institution.

- xiii. There is no mechanism to address grievances and conduct disciplinary proceedings against arbitrators.
- xiv. There are no provisions for taking action against an arbitral institution for failing in its duties.
- xv. There are no penal provisions for misconduct, misrepresentation and gross negligence on the part of arbitrator or against the functionaries of an arbitral institution.
- xvi. There is no Model Code of Conduct for arbitrators to follow. The Fifth Schedule and Seventh Schedule to the Arbitration and Conciliation Act, 1996, do not measure up to a Model Code of Conduct. No importance is shown on certain parameters, like integrity, fairness, independence, professional competence, upholding confidentiality, attraction to being fleeced with gifts, travel, hotel accommodation, etc.
- xvii. Presently, there is no provision regarding qualification and experience of arbitrators. With the deletion of the Eighth Schedule to the Act, full freedom is available to the parties to appoint anyone as an arbitrator, so long as both the parties agree on one person.
- xviii. There are no Model Bye-laws for arbitral institutions. Presently, they are free to prepare their own bye-laws without any oversight by any statutory authority.
- xix. Arbitrators do not enjoy the same respect as members of other professions like doctors, architects, Chartered Accountants. The parties to dispute do not have full faith

in the system of arbitration. Arbitral awards are frequently challenged in the courts of law, leading to further litigation.

- xx. Frequent changes in the arbitration law has weakened party autonomy and weakened enforceability of arbitral awards.

### WAY FORWARD

The flaws mentioned above provide a ground for bringing changes and carrying out improvements in the system. Following are some suggestions.

1. Presently, any lawyer or a judge can be appointed as an arbitrator without having specialised exposure to subtle nuances of arbitration. Although arbitration law is a subset of general law, it is by itself a distinct field of study and expertise. It requires distinct skill sets. An arbitral tribunal should consist of domain expert, law expert and finance expert, giving a balanced view for resolution of commercial disputes.
2. A two-tier statutory body for regulation, development and growth of the arbitration profession is very much required. Firstly, one body should be appointed as a statutory authority to regulate and develop arbitration profession with clear aims, objectives, role and responsibilities. Secondly, there should be second-tier organisations with due recognition as “Arbitral Institutions”. These arbitral institutions should serve the role of frontline regulators for registering, monitoring, disciplining its members who act as arbitrators. These arbitral institutions should

remain under overall oversight of principal regulator.

3. A mechanism needs to be put in place so that arbitrators have a responsibility to update their competence, knowledge or skill and update themselves on latest case laws on arbitration matters. There has to be a monitoring body and disciplinary body to monitor their conduct, performance and compliance with the rules and regulations. There has to be peer review of the arbitral awards passed by them so that they realise their mistakes and take steps to improve their performance in future. Arbitrators should attend seminars, webinars or workshops to earn a minimum number of CEP hours under Continuing Education Programme. It is essential for maintenance, growth and development of arbitration as a profession.
4. A person having the requisite experience and having passed an arbitration examination conducted by the regulator, should seek registration with the statutory regulator through the arbitral institution of which he is a member. Upon grant of registration, that person would be a fit person to act as an arbitrator in any commercial dispute. Each arbitrator should be registered with one arbitral institution.
5. A person should be eligible to be a member of an arbitral institution if he has passed an arbitration examination within 3 years preceding the date of making the application. The syllabus of the arbitration examination should be laid down by the statutory authority and it should be compulsory

for all the applicants. Besides passing the exam, the person should possess experience of working in any corporate, court, Government department or engaged private practice for at least 3 years after qualifying a post-graduation degree or equivalent as defined by the regulator. This post-graduation degree could be in law, engineering, finance, medicine or any other field. This is to ensure that domain expertise is available to the arbitral panel.

### CONCLUSION

With an aspiration to make India a 5 trillion USD economy in the next 2-3 years, it is high time that a well-functioning institutional framework is established with arbitral institutions confirming to the best international practices. Out of the two bodies incorporated during 2019, one needs to be granted the status of a statutory regulator with complete responsibility for development and growth of the profession, recognising and regulating the working of arbitral institutions. This will ultimately enhance the competence and efficiency of our arbitrators to international levels. Ultimately the success of our arbitrators may become envy of other hubs of arbitrations. It is certainly a long journey, but the first step needs to be taken. **MA**

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# BEHAVIOUR OF DIVIDENDS OF SELECT CEMENT COMPANIES IN INDIA: A STUDY



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## INTRODUCTION

The relevance of dividend policy decisions to investors and managers is well understandable. However, the financial variables that influence the dividend policy of any concern are ambiguous. Researchers have not been able to reach a consensus regarding the determining variables of dividend policy. Thus, there exists a lack of unanimity on the factors on which the dividend decision of any firm depends. Additionally, studies have shown that the category of the industry also plays a determining role (Michel, 1979; Baker, 1988, as cited in Baker & Powell, 2000). But studies focusing on industry-specific dividend policy determining factors are very scanty. Hence, the present study focusses on the dividend payment behaviour of the cement sector in India.

Apart from the developmental potential of an emerging economy, the factors that warrant a study of the equity dividend behaviour of the cement sector in India are: *one*, the demand for cement is essentially a derived demand and it primarily caters to the construction sector; *two*, the product cement is such that it solidifies when in contact with moisture. Therefore, the demand for cement falls during monsoons. Both these factors influence profit and cash available from operations which in turn influences the equity dividend payment of the firms.

## LITERATURE REVIEW

### Profit After Tax (PAT)

Dividends are a slice of the profits of the firm.

## Abstract

*Dividend policy merits attention from both the manager's and the owner's perspective. Extant literature documents the influence of dividend decisions on the price of the shares of the company and thereby, the wealth of shareholders. However, to date, there has been no consensus among financial researchers regarding the financial elements that influence firms' dividend decisions. Industry-specific studies on dividend policy are also rare. The two financial elements that received special attention among academic fraternity with regard to dividends are — Profit after tax and cash from operating activities available to the equity shareholders. However, dividend policy of an industry whose earnings depend on the climatic conditions like the cement sector warrants due attention. This study, therefore, explores the behaviour of equity dividends distributed with regard to profit after tax and cash from operating activities available to the equity shareholders of the cement sector in India.*

Unequivocally, therefore, profitability is one of the primary deciding elements factor for a dividend decision of a firm. According to Lintner (1956) the dividend payment behaviour of a firm depends on its present earnings. Similarly, Longinidis & Symeonidis (2013) conceded net operating profit after tax as an impactful financial element in the dividend payment decision of the firms. Therefore, in this study too profit after tax (PAT) is considered for assessing the behaviour of dividend payment of the select cement companies in India.

### Cash from operation available to equity shareholders

Baker et al. (1985) acknowledged that managers regard cash available as an important factor governing their

dividend decision, with no deviation in the Indian context too ( Baker & Kapoor, 2015). Similarly, Amidu & Abor (2006) note that liquidity in the form of cash bears a significantly positive linkage with the firms’ dividend pay-out ratio.

**RESEARCH GAP**

It has been mentioned earlier that industry-specific study on dividend policy is rare. Moreover, a study based on dividend policy of an industry, like cement, whose earnings are dependent on climatic conditions is not at all available. This study is an exception to fill this void.

**OBJECTIVES**

This study attempts to analyse the equity dividend payment behaviour of the cement sector in India. More specifically the study focusses on —

1. The relationship between equity dividends and profit after tax (PAT) of the select cement companies in India
2. The relationship between equity dividends and cash from

**Demand for cement falls during monsoons**

operation available to equity shareholders of the select cement companies in India.

**RESEARCH METHODOLOGY**

The study is empirical in nature and based on secondary data. The data of Indian cement companies is collected from CMIE Prowess. There are 196 companies in total in the database. 19 companies are filtered from the data under the criteria—*One*, the company is listed in BSE and *two*, continuous availability of data for the chosen variables from 2001 to 2020. The two chosen variables for the study are profit after tax (PAT) and cash from operating activities available to the equity shareholders.

The primary source of liquidity for any firm is cash from operating activities. Since debtholders and preference shareholders have their

stake in cash flow from operating activities, to determine cash from operating activities available to the equity shareholders, interest and then preference dividend are deducted from cash from operating activities. Accordingly, 380 firm-year observations (19 multiplied by 20) are considered for the analysis. Pearson’s correlation and the Ordinary Least Square method of regression are employed for the analysis. The data is run in SPSS for obtaining results.

**FINDINGS OF THE STUDY**

In Table I, it is observed that Pearson’s correlation coefficient between PAT and equity dividend is 0.88113. The results show a significant p-value of 0.00000 implicating strong and positive correlation between the PAT and equity dividend. The R<sup>2</sup> is 0.77638 evidencing that 77.6% of the variance in equity dividends is accounted for by PAT. The Table also implicates the derived regression model significantly predicts equity dividend with F (1,378) =1312.39985, p=.00000.

TABLE I

Table showing R value between PAT and Equity Dividend, significance of R, R <sup>2</sup> , F-value and significance of F-value for the 19 sample cement companies				
R	Sig.	R <sup>2</sup>	F-value	Sig.
0.88113	0.00000	.77638	1312.39985	.00000

TABLE II

Table showing the constant, coefficient of the predictor variable PAT, the t-value of the predictor variable PAT and the significance of the t-value.			
Constant	Slope	t-value of PAT	Sig.
-4.75709	.29094	36.22706	.00000

From Table II, the regression model is formulated:

$$\text{Equity Dividend} = -4.75709 + 0.29094 * \text{PAT}$$

The relationship is positive and statistically relevant at 1 per cent.

Table III shows Pearson’s correlation coefficient between cash available to equity shareholders from operating activities and equity dividend is 0.83297. The results show a significant p-value of 0.00000 implying strong positive correlation between cash available to equity shareholders from operating activities and equity dividend. The value of R<sup>2</sup> is 0.69384. It implies that 69.4 per cent of the variance in equity dividends is explained for by cash from operating activities available to equity shareholders. The Table also implicates the derived regression significantly predicts equity dividend with F (1,378) =856.64824, p=.00000.

TABLE III

Table showing R value between Cash available to Equity Shareholders from operating activities and Equity dividend, significance of R, R <sup>2</sup> , F-value and significance of F-value for the 19 sample cement companies				
R	Sig.	R <sup>2</sup>	F-value	Sig.
.83297	0.00000	.69384	856.64824	.00000

The regression model is formulated from Table IV:

Equity Dividend = -34.75950 + 0.21049\* (Cash from operating activities available to equity shareholders)

The relationship is positive and statistically relevant at 1%.

TABLE IV

Table showing the constant, coefficient of the predictor variable Cash available to Equity Shareholders from operating activities, the t-value of the predictor variable Cash available to Equity Shareholders from operating activities and the significance of the t-value			
Constant	Slope	t-value of Cash available to Equity Shareholders from operating activities	Sig.
-34.75950	.21049	29.26855	.00000

**The cement companies have greater urge to pay equity dividend to their shareholders**

A comparative evaluation of the relationship of both the variables, viz., PAT and cash available to equity shareholders from operating activities with equity dividend also suggests that PAT ( $r = 0.88113$ ) has a greater affinity to equity dividend compared to cash available to equity shareholders from operating activities ( $r = 0.83297$ ). Moreover, PAT holds a better explanatory power for the variance in equity dividend which is 77.6 per cent compared to cash available to equity shareholders from operating activities which is 69.4 per cent.

### CONCLUSION

This study evidences that profit after tax and cash flow from operating activities available to the equity shareholders are the two significant determinants of equity dividend payment in the Indian Cement Industry. Both the variables show a

positive and a significant association with equity dividend payment. It implies, that the higher the values of profit after tax and cash flow from operating activities available to the equity shareholders, the cement companies have greater urge to pay equity dividend to their shareholders. Additionally, this study proves that PAT has a greater affinity to equity dividend as compared to cash flow from operating activities available to the equity shareholders. Moreover, PAT holds a greater explanatory power in accounting for the variations in equity dividend than cash flow from operating activities available to the equity shareholders. **MA**

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# ASSESSMENT OF TQM DIMENSIONS IN INDIAN ORGANIZATIONS: A SYSTEMATIC LITERATURE REVIEW

## Abstract

*The purpose of this article to present a Literature review to identify and prioritize a list of total quality management dimensions / critical success factors pertaining to India based manufacturing and service organizations for the benefit of researchers, academicians and industries. This review utilizes a critical study of literature retrieved through multiple databases such as Emerald, Taylor and Francis, Elsevier, Inderscience, ProQuest ABI/Inform and Search engine Google Scholar. The articles from year 2001 to 2020 were reviewed in a systematic manner and some significant points such as period wise publication, Pareto analysis were considered. The study of 61 Research Papers resulted in a list of 47 Critical Success Factors that were identified and classified in downward order using Pareto analysis and 18 vital few CSFs were finally identified. This review attempts to provide useful implications from organizational perspective and the outcome of this study will help researchers and academicians to have clear understanding of TQM and its dimensions.*



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## INTRODUCTION

It is a challenging task for Indian manufacturers and service providers to deal with cut throat competition and survive. This is only possible with building brand image through exceptionally remarkable quality of products and services. It has become essential to furnish products and services that emphasize on customer satisfaction. Therefore, the Indian companies desperately need new ideas and concepts and techniques to attain a competitive edge over competitors (Kumar *et al*, 2009).

“Total quality management is an integrated management concept aimed at continuously improving the quality and process to achieve customer delight” (Karuppusami and

Gandhinathan, 2006).

Critical success factors (CSFs) are variables which determine successful implantation of TQM in an organization. CSFs are basics for the firm's success and must be managed diligently to improve further.

### OBJECTIVES OF THE STUDY

This study is largely divided into the following four parts:

- ⊙ Methodology
- ⊙ Interpretation of literature review
- ⊙ Identification and classification of CSFs in downward order
- ⊙ Discussion and conclusion

### LITERATURE REVIEW

TQM is considered to be one of the most distinguished management systems capable to gain sustainable competitive edge and improve organizational performance and effectiveness (Oza and Shiroya, 2015). TQM is a well-established management philosophy for overall improvement wherein researchers, academicians, practitioners and engineers have contributed through their convincing ideas towards its advancement. In this review several studies have examined the dimensions of TQM (Anil AP, 2017; Bajaj S *et al*, 2018; Kumar and Sharma, 2017). The TQM dimensions are termed in some of the studies either as 'principles' or 'practices' or 'Critical success factors' or 'constructs' but the essence of dimensions remains unchanged. Talib and Rahman, (2010) summarized that there is dire need to know the most relevant management practices that are critical to the organization and explained that CSFs are practices which must be widely emphasized and extensively campaigned all across the organization to achieve the strategic goals. The investigation of these factors is the prime objective of this study.

**TQM is considered to be one of the most distinguished management systems capable to gain sustainable competitive edge**

#### Identification of variables

Anil and Satish (2017) in their study identified 10 CSFs which were found to be useful and could result in improved customer satisfaction. The identified factors are Leadership; Process management; Customer focus; Education and Training; Information and analysis; Employee empowerment; Continuous improvement; Quality Assurance; Knowledge management, Education and Training;

Bhaskar H L (2020) discussed 12 CSFs as Leadership; Product and Service design; Continuous improvement; Strategic planning; HRM and development; Team work; Customer satisfaction; Benchmarking; Customer focus; Quality and operational results; Coordination; Information and analysis.

Khanna, HK, *et al* (2011) identified 10 CSFs as Leadership, Education and Training, HRM and development, Supplier quality management, Quality assurance, Quality citizenship, Customer focus, Information and analysis, Product and Service design, Process management.

Kumar and Sharma (2017) explored 14 CSFs such as Leadership; Education and Training; Product and Service design; Continuous improvement; Strategic planning; HRM and development; Team work; Customer satisfaction; Quality culture; Product quality; Zero defects; Customer feedback; Quality tools and techniques; and Just-in-Time.

Kumar, R *et al* (2009) focused on 10 CSFs as Leadership;

Employee empowerment; Supplier relationship; Customer satisfaction; Communication; Reward and recognition; Quality and operational results; Quality tools and techniques; Fast result techniques; and Advance quality planning.

Similarly several other studies conducted by different researchers are also found to be well described and are of interest for the research.

### METHODOLOGY

There is considerably large number of articles and related literature available on the core topic TQM. To get a wider reach of critical success factors, this review is restricted to following online databases:

- ⊙ Emerald
- ⊙ Taylor and Francis
- ⊙ Elsevier
- ⊙ Inderscience
- ⊙ ProQuest ABI/Inform

Research articles were also collected from search engine *Google Scholar*. For effective working on the review, distinguished criteria were set to identify and select most relevant articles from the databases and search engine as mentioned hereunder:

1. The study considers articles published within the specific phase from year 2001 to 2020.
2. Research articles which were related to manufacturing and service sectors with Indian context were considered. Articles from sectors like Textile, FMCG, Telecom, Educational, Construction, Oil and Gas, IT were not taken into consideration.
3. Online blogs, conference papers, dissertation and unpublished papers were excluded in the study.

After finalization of research criteria, a comprehensive research on the relevant articles was conducted

and as an outcome a total 61 papers were selected for the study.

**INTERPRETATION OF LITERATURE REVIEW**

The selected research articles were reviewed on the basis of the following points:

- ⊙ Period wise Publication

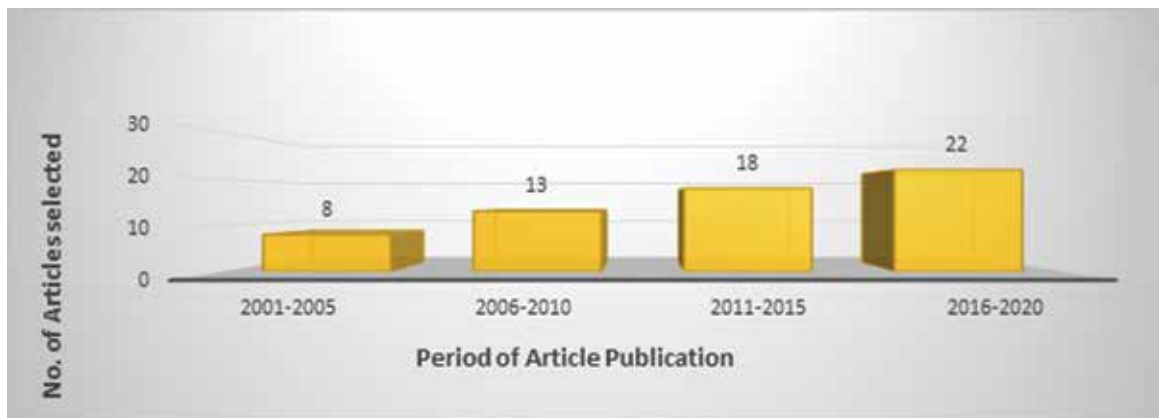
- ⊙ Research types
- ⊙ Timeline distribution
- ⊙ Period wise distribution of sectors

**Period wise Publication**

This study analyses a total of 61 research articles and the selected papers were published between 2001

to 2020 in a dedicated time span of 20 years. The articles were classified on the basis of time period (5 year phase block) as shown in Figure 1 that clearly shows steady growth of articles over the years, it is evident that researchers and organizations have put in sincere efforts for effective application of TQM concepts.

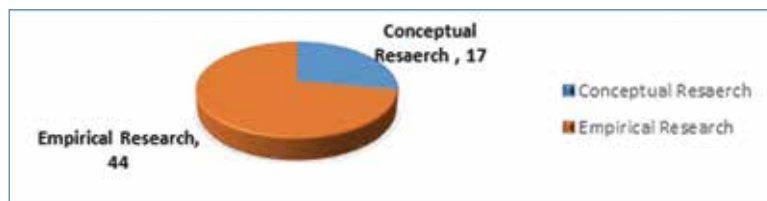
FIGURE 1.  
PERIOD WISE PUBLICATION OF ARTICLES



**Research types**

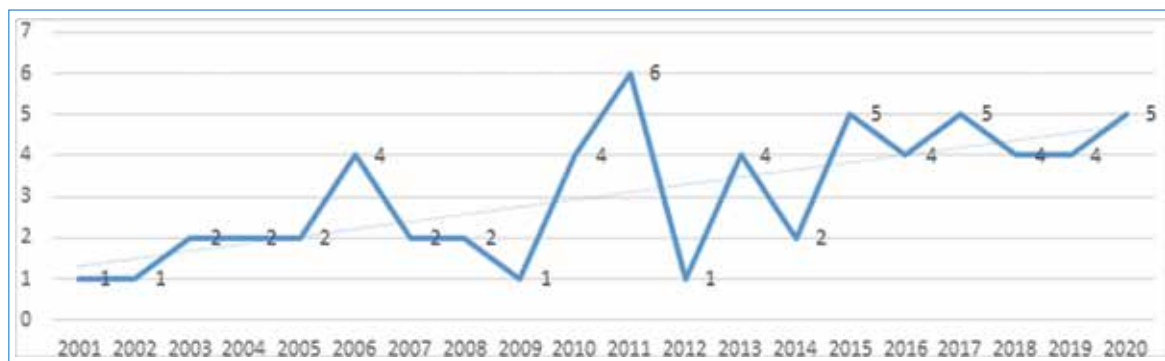
Articles were categorized considering research type; hence in the total population of 61 articles, 17 are conceptual in nature whereas 44 are empirical as shown in Figure 2

FIGURE 2.  
TYPE OF RESEARCH STUDY



**Timeline distribution**

FIGURE 3.  
DISTRIBUTION OF ARTICLES



The research articles published in the last two decades are non-uniformly distributed in time line. The year 2011 witnessed the maximum number of articles published on the selected study but there was sharp decline thereafter in 2012 probably due to the impact of comparatively newer practices like Six Sigma, Lean Six Sigma etc. However, recovery was witnessed in TQM research articles in the subsequent years as

shown in the above Figure 3.

### Period wise distribution of Sectors

Table I illustrates the classification of research articles studied, basis, application sector and time period. This study is aimed primarily at manufacturing and service sectors. 51 research articles were designated to 11 Application sectors. The remaining 10 articles did not belong to any

specific sector and were designated 'General'. On analysis it was found that sectors like manufacturing (34.43 per cent), automobile (11.48 per cent), service (9.84 per cent), SMEs (9.84 per cent), manufacturing and service (4.92 per cent), cement (4.92 per cent) have contributed significantly for this study. The data also shows the scant research in airlines and banking sectors related to TQM.

TABLE I.  
DISTRIBUTION OF DATA BASIS PERIOD AND APPLICATION SECTOR

<i>Application sector</i>	<i>2001-2005</i>	<i>2006-2010</i>	<i>2011-2015</i>	<i>2016-2020</i>	<i>Total</i>	<i>%</i>
General	1	3	2	4	10	16.39
Manufacturing	2	4	6	9	21	34.43
Automobile	4	1		2	7	11.48
Cement			3		3	4.92
Steel		1			1	1.64
SMEs			2	4	6	9.84
MSMEs				1	1	1.64
Service		3	3		6	9.84
Manufacturing and Service	1			2	3	4.92
Manufacturing, Service and Govt. Sector		1			1	1.64
Banking			1		1	1.64
Airlines			1		1	1.64
Total	8	13	18	22	61	100.00

### IDENTIFICATION AND CLASSIFICATION OF CSFS IN DOWNWARD ORDER

The critical success factors of TQM identified and highlighted by different researchers in 61 articles have been tabulated and classified in Table II and Table III. The data so produced was subjected to Pareto analysis which is a statistical tool that classifies the data in downward order from highest to lowest frequency of occurrence (Karuppusami and Gandhinathan, 2006). Pareto analysis follows the legendary 80: 20 principle due to which frequency is totaled up to 100 per cent. There are two types of categories on the basis of occurrences as *Vital few* that represents 80 per cent of cumulative percentage whereas *Useful many/Trivial many* represents 20 per cent of cumulative percentage represented in Table II and Table III respectively.

Table II  
List of CSFs - Vital Few

<b>TQM Practices / CSFs</b>	<b>Frequency</b>	<b>Frequency % age</b>	<b>Cumulative</b>
Leadership	59	9.93	9.93
Process management/efficiency	42	7.07	17.00
Customer focus	41	6.90	23.91
Education & Training	34	5.72	29.63
Information & analysis	33	5.56	35.19

Employee involvement and empowerment	29	4.88	40.07
Product and service design	27	4.55	44.61
Continuous improvement	24	4.04	48.65
Strategic planning	24	4.04	52.69
HRM and development	23	3.87	56.57
Supplier quality Management	22	3.70	60.27
Supplier relationship/management	22	3.70	63.97
Team work	19	3.20	67.17
Customer Satisfaction	17	2.86	70.03
Quality assurance	16	2.69	72.73
Benchmarking	15	2.53	75.25
Employee encouragement	14	2.36	77.61

Table III  
List of CSFs - Useful Many

TQM Practices / CSFs	Frequency	Frequency % age	Cumulative
Organization system / Culture	11	1.85	81.65
Quality system	10	1.68	83.33
Quality culture	10	1.68	85.02
Reward and recognition	9	1.52	86.53
Product quality	6	1.01	87.54
Knowledge Management	6	1.01	88.55
Quality and operational results	6	1.01	89.56
Resource Management	5	0.84	90.40
People management	5	0.84	91.25
Innovation	5	0.84	92.09
Customer feedback	5	0.84	92.93
Worker Manager Interactions	5	0.84	93.77
Quality Tools & Techniques	4	0.67	94.44
Decision making	4	0.67	95.12
Performance measurement system	3	0.51	95.62
Equipment management/tools & technique	3	0.51	96.13
Coordination	3	0.51	96.63
Technology	3	0.51	97.14
Zero Defects	3	0.51	97.64
Market Benefits	2	0.34	97.98
Social responsibility	2	0.34	98.32
Just- in- Time	2	0.34	98.65
Advance quality planning	2	0.34	98.99
Organizational trust	1	0.17	99.16
Vision and plan statement	1	0.17	99.33
Material management	1	0.17	99.49
Lean Management	1	0.17	99.66

Values & Ethics	1	0.17	99.83
Congenial inter personal relations	1	0.17	100.00

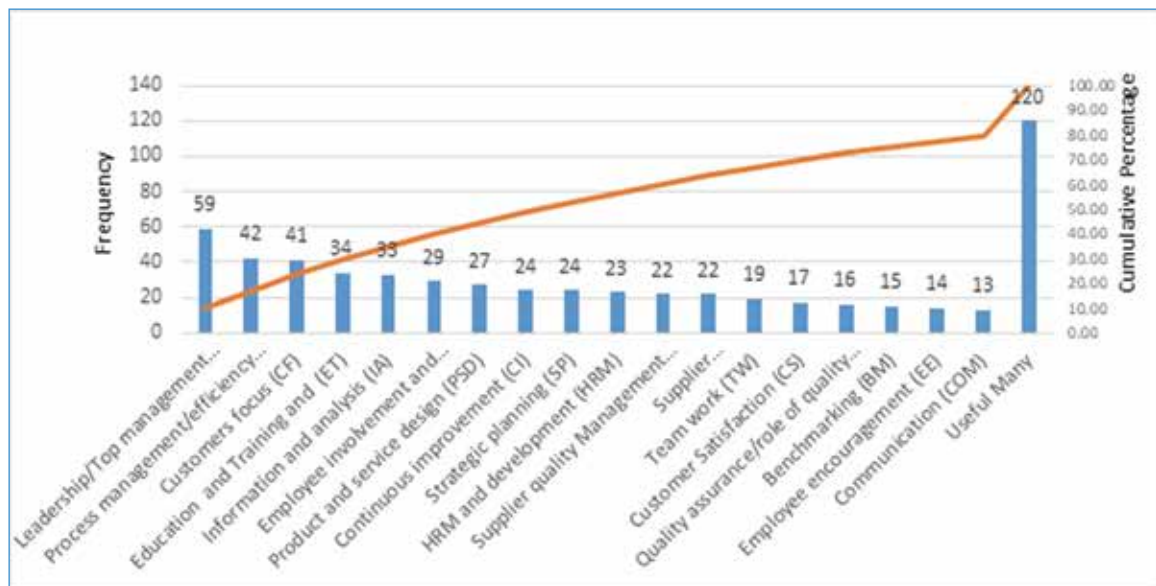
Forty seven success factors were identified from 61 research articles with cumulative frequency amounting to 594. 18 success factors having 80 per cent of cumulative percentage were grouped together as shown in Table II. Similarly, in the “Useful many category”, 29 CSFs having 20 per cent of cumulative percentage were grouped as depicted in Table III. The outcome so obtained through the above analysis are shown in Pareto Graph as Figure 4 that clearly represents the CSFs in descending order and a clear point which separates 80% of cumulative percentage from 20 per cent of least important CSFs (Bajaj, S. *et al*, 2018).

## DISCUSSION AND CONCLUSION

The researcher has reviewed research articles from reputed online databases and search engine for the time frame from 2001 to 2020 considering application in manufacturing and service firms in Indian context. A critical review of 61 articles resulted in compilation of 47 distinguished factors. For any organization, this is an uphill task to apply these factors and get the things operationalize. The identified CSFs have been classified in downward order of occurrences thru’ Pareto analysis. The Pareto analysis suggests 18 CSFs that also gained attention

by several researchers during the last 20 years. The identified and prioritized CSFs are Leadership / Top management commitment, Process management, Customer Focus, Education & Training, Information and Analysis, Employee involvement & empowerment, Product and Service design, Continuous improvement, Strategic planning, HRM, Supplier Quality management, Supplier relationship, Team work, Customer satisfaction, Quality assurance/role of quality department, Benchmarking, Employee encouragement and Communication.

## DISTRIBUTION OF DATA BASIS PERIOD AND APPLICATION SECTOR



The suggested vital few CSFs are of prime importance not only for manufacturing and services firms but other industries can also adopt and implement the same over a defined time frame. It is suggested that future researchers can develop research model on the basis of outcome of this review paper. This study will certainly assist in application of TQM program in various fields in an efficient and

effective manner. **MA**

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## SIGNING OF MOU WITH JIO

**T**he Institute of Cost Accountants of India and Jio Platforms Limited signed a Memorandum of Understanding on 29th September 2022 at CMA Bhawan, New Delhi. The MOU was signed by CMA P. Raju Iyer, President of the Institute and Mr. Saurabh Sancheti, Chief Financial Officer of Jio Platforms Limited.

Under this MOU, Jio will provide following services to the Institute:

- ⊙ **ICAI-CMA TV - Dedicated Content Broadcast under Institute name:** ICAI-CMA TV that will allow us to have a series of special channels under Institute brand name to telecast the live and recorded contents of education, Culture, innovation, Skill development etc.
- ⊙ **ICAI-CMA Chat - Real time communication channel:** ICAI-CMA Chat channel as digital noticeboard for members and students for real time updates.
- ⊙ **ICAI-CMA Meet / ICAI-CMA Webinars:** This app will be used for 2-way interactive conversations - be it for Video Conferencing, Seminars, Classroom or any Cultural Community events between multiple centres and members, students.
- ⊙ **ICAI-CMA APP:** The Institute in association with Jio will develop ICAI-CMA mobile app for the Institute. This app will work on Android mobile phones and JIO enabled phones.

# TRUST, ETHICS AND GOVERNANCE: A CORPORATE PERSPECTIVE



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## Abstract

*Trust is the foundation for investors. To keep their trust intact, managers must have ethics. While doing business, managers must treat investors' money as their own. Business ethics can ensure good corporate governance, while a lack of it leads to business failures (Enron, Satyam, ILFS, DHFL). When business ethics is intact, the quality of internal control is strong and corporate governance plays a paramount role. This conceptual article accentuates the important role that ethics plays to build trust for effective governance from the corporate perspective besides dwelling on important issues, challenges, and implications.*

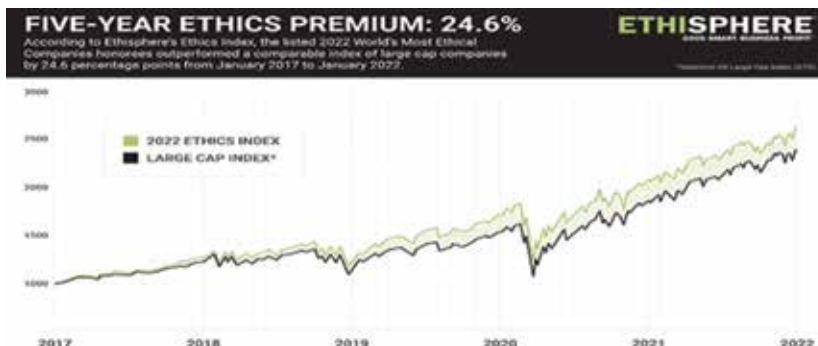
managers who are competent (logic) and they trust when their investment is taken care of (empathy). Earning trust takes decades and in a moment, it gets destroyed (Institute of Directors, 2019). Trust was found as a key mechanism connecting the governance structure and the employees (Müller, 2012). According to Butler and Cantrell, there are five specific components of trust, viz., integrity, competence, consistency, loyalty and openness (Hosmer, 1995). Once trust has been developed with stakeholders, it can lead to business transformation. Conversely, low trust among stakeholders results in business downfall and extinction (Oswald & Mascarenhas, 2019).

Ethics and trust are indissolubly associated (Willingner). Ethics considers good and bad, right and wrong. Ethics defines the standards for decision-making. Normative ethics focuses on what ought to be done in a particular business situation. Ethical companies garner better premiums (Figure 1).

## INTRODUCTION

Trust is everything, even the foundation for business transactions and laws to operate (Frei, & Morriss, 2020). Investors trust a corporate entity which exists in reality (authenticity); they trust governing

FIGURE 1: ETHICAL COMPANIES OUTPERFORMED LARGE COMPANIES



Source: <https://worldsmoethicalcompanies.com/wp-content/uploads/Ethisphere-Ethics-Index-2022.png>



*Business ethics*, a new class of managerial discipline evolved in the 1970s by advocates of corporate social responsibility (Stark, 1993). Business ethics emphasizes principles of honesty and duty towards managing a business. Business ethics if strictly pursued, can lead to a decent business environment, and create healthy relationships in the organization. Lack of business ethics can be due to ignorance, selfishness, and flawed reasoning.

Governance is the process of decision-making and implementation. It focuses on actors and structures to implement the decisions made (UNESCAP, 2008). Good governance is ideal, though it is difficult to adhere. Ethical governance goes beyond governance (Winfield & Jirotko, 2018). It ensures ethical behaviours for individuals and organizations. Normative ethical governance entails a proactive approach. The practice of good governance increases trust in business and enhances trustworthiness from stakeholders' perspectives (Rossouw, 2005).

Trust provides connectivity between governance and fair decision-making. **Trust and responsibility strengthen reputation. Today heightened public awareness, class action suits and regulators' activism have ensured greater accountability for directors. To meet challenges, the effective role and requisite skills of the Board make a significant difference. As a steward, the Board must ensure that investors should not be at a loss for their socially responsible investments. In this context, trust, ethics and governance in true spirit can make significant contributions to companies if managerial personnel care for investors' money.**

Micro-level issues of firms and corporate frauds led to institutional legal reforms and corporate governance developments. In 1992, the Cadbury Committee's recommendations brought revolutions. The Committee emphasised reporting on the

**Trust, ethics and governance in true spirit can make significant contributions to companies if managerial personnel care for investors' money**

effectiveness of the internal control system. Internal control serves as an important yardstick for ensuring ethical corporate governance (Sharma & Manji, 2022). As globally there were many unethical corporate events, India too had similar experiences. The frauds of Enron (2000, US) and Satyam Computers (2008, India) were a few worst experiences. The DHFL debacle and Tata Group's management conflict with Cyrus-Mistry raised further doubts about the efficacy of the corporate governance system. The fundamental goal of corporate governance is to protect the interests of stakeholders, particularly equity shareholders (Securities and Exchange Board of India: SEBI). Freeman's 1984, the *stakeholders' theory* supported that organizations are responsible to protect the interest of stakeholders than just shareowners. Henceforth, companies are expected to provide adequate returns to their investors (Shleifer & Vishny, 1997). According to the *stewardship theory*, professional managers as good servants are expected to make optimum use of organizational resources (Donaldson & Davis, 1991).

### OBJECTIVES

This conceptual study intends to achieve the following objectives:

1. To explore the role of trust, ethics, and governance from a corporate perspective.
2. To devise an ethical corporate governance framework.

3. To point out issues, challenges, and implications for decent corporate governance systems and practices.

### CORPORATE GOVERNANCE DEVELOPMENTS IN INDIA

In the Indian context, business laws and regulations are traced back to the connection and operations of the East India company. Corporate governance developments in Western countries particularly in UK and US reinforced India, then a liberalizing economy in the 1990s to think about the concept. Recommendations of the Cadbury Committee (1992) drove the impetus for corporate governance. The regulatory landscape of corporate governance dictates "comply or explain" (UK) or "comply" (India) approach. In India, corporate governance initiated from CII's Desirable Corporate Governance: A Code (1998) to the Kotak Committee (2017) and the latest CII Code (2020) remains inexorable. In 2008, Satyam's fraud had wider ramifications and forced think-tanks to revamp the erstwhile Companies Act, 1956. Consequently, the Companies Act, 2013 was enacted which has brought in comprehensive corporate governance reforms (Chaplot, 2021). Subsequently, Clause 49 of the Listing Agreement became redundant, and SEBI enacted the LODR Regulations, 2015 containing corporate governance norms. These regulations have been amended several times since their inception. Logical grounds of global convergence warranted the Indian economy to be at par with international standards in terms of corporate governance. Provisions of corporate governance might differ across countries. Corporate governance discrepancy is a global phenomenon (Business Standard, 2017). Despite this, the spirit of corporate governance remains the same across nations. Internationally, the latest developments include the King Committee (2016) principles

for small businesses and formulation of G20/OECD (2023) principles of corporate governance encompassing emerging business issues (Covid-19, Russia-Ukraine scenario), non-financial reporting practices, raising finance in crisis besides sensing United Nations Sustainable Development Goals (SDGs, 2030).

**REGULATORY LANDSCAPE OF CORPORATE GOVERNANCE: AN UPDATE**

Adhering to corporate governance norms is mandatory for listed companies in India. The regulatory landscape comprised of the provisions enacted as per the Companies Act,

2013 and Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015. It implies unavoidable compliance costs for listed firms. Hence, it's better to comply with ethical corporate governance passionately as it had proved advantageous for firms (Rathod, 2018).

**The Companies Act, 2013**

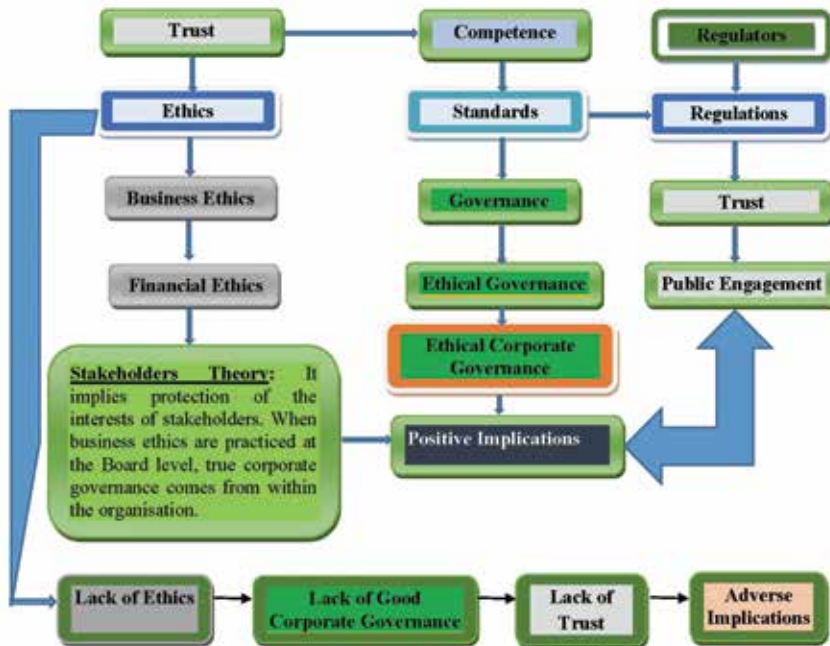
The Companies Act, 2013 has prescribed regulatory dimensions of corporate governance. Though, the aforesaid Act has not defined the term 'corporate governance' it has detailed provisions of corporate governance

have been prescribed.

**SEBI LODR Regulations 2015**

As per regulations 15(1) [1A], 16, 17 and Schedule II of SEBI LODR Regulations 2015, every listed company with paid-up equity capital and net worth exceeding 10 Crores and 25 Crores respectively and those companies having outstanding listed non-convertible debt securities exceeding 500 Crores must adhere to corporate governance requirements. The SEBI LODR Regulations have provided much clarity on principles governing disclosures, obligations, and reporting on corporate governance by listed entities.

FIGURE 2: ETHICAL CORPORATE GOVERNANCE FRAMEWORK



Source: Prepared by the author

**ISSUES, CHALLENGES, AND IMPLICATIONS**

⊙ *Lack of Ethics: Greed, uncaring attitude toward investors and lack of ethics are the main causes of governance failure. The company should adhere to ethical policies to develop trust and good governance that comes from within the organisation*

(Bikhchandani, 2022). In practice, ethical companies have outperformed large companies (Figure 1). Boards can play an important role to ensure that business ethics are intact. Every Board member needs to contribute and work honestly for the company.

⊙ *Divergence of Interests: The deviation of interests*

between principal owners and director-agents is a hostile issue. It stimulates several interventions and high monitoring costs. Managers must behave ethically and build trust by caring as much for investors and stakeholders as for them.

⊙ *Lack of Continuous and Timely Communication:*

The communication gap might prove a root cause for failures (Bhadshiya et al., 2021). Proper communication between the company, Board, and its shareholders plays an important role in decision making. Coordinative efforts are required to *practice the convention of full disclosures of material information*.

- ⊙ *Ignorance of Minority Shareholders*: Sometimes, the interests of minority shareholders are ignored. The company must protect the interests of minority shareowners (Subramanian, 2015). Equal treatment and suitable considerations to be provided to the minority shareowners.
- ⊙ *Board's Role*: Boards' passive role can be perilous for the entity. Active Board can make desirable transformations. The Board should work on an ethical stance. *The Board, particularly executive directors are responsible for inculcating an environment of trust and ethics in business dealings*. The Board can significantly contribute to the value creation for the stakeholders.
- ⊙ *An Unpremeditated Approach*: In spirit, adherence to corporate governance cannot be forced. The narrow sense of mere compliance may not yield desirable outcomes. Accidental corporate governance leads to short-termism. The law intends to enforce it. It's up to the company directors to implement. Corporate governance is a serious, long-term, value-creating activity (McKinsey, 2000; Black & Khanna, 2007; Dharmapala & Khanna, 2008; Balasubramanian et al., 2008; IFC, 2016) and sharing process

for and imprinting corporate footprints.

- ⊙ *Challenges in Terms of Growing Compliances*: Regulatory landscape is rising day by day. Board needs to ensure that in addition to corporate governance norms, corporate social responsibility, as well as Business Responsibility and Sustainability Reporting requirements are fulfilled. This requires Board dynamics in terms of skilled managerial personnel, directors, diversified Boards, and enterprise resources.
- ⊙ *Strategic Boards*: Boards need to avert *short-termism* (Paine & Srinivasan 2019). Both short and long-range plans are required to meet new business challenges (Dey, 2022). To implement plans, Board must make optimum strategies according to the nature of business challenges. These practices provide business resilience during crisis periods.

### CONCLUSION

Trust, ethics, and governance practices provide fundamental values for doing business. Lack of ethics is a root cause of corporate failures. New business responsibility is increasing day by day. Investors put their money by trusting the company management and the Board. It's the moral obligation that the Board fulfils the expectation of investors and keep the trust intact. Board and the stakeholders must trust each other and then ethics and governance will be stable. In ensuring this, the Board dynamics can play a critical role. Board members are expected to resolve issues of minorities and make decisions that facilitate auditors and support independent directors for smooth conduct of business safeguarding the interests of investors. Public trust, business

engagement and regulators expect an *active Board* to solve agency issues by ensuring transparent corporate conduct. *The role of the Board is a cornerstone for revitalizing good corporate governance*. Good corporate governance promotes equality and stewardship of scarce corporate resources. Though, adherence to corporate governance serves compliance for large and listed companies, its most important facet is ethical governance. Ethical corporate governance or good corporate governance is better than governance. *It ensures legitimate actions and honest practices by the corporate entities*. Some companies may adhere to corporate governance just for compliance, but others surely may practice *good corporate governance in true spirit as a model for others to emulate and enlighten stakeholders' interests by reaping tangible and intangible benefits*.

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## POST-GRADUATE PROGRAM ON FINANCIAL PLANNING AND WEALTH MANAGEMENT

IN COLLABORATION WITH  
**CCPTR, MAKAUT (WBUT) UNIVERSITY,  
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# Down The Memory Lane

November 2012



Shri Oommen Chandy, Hon'ble Chief Minister, Govt. of Kerala delivering the inaugural address during ASAP launch. Seen CMA Rakesh Singh, President of the Institute, Shri P.K. Abdu Rubb, Minister for Education, Shri Shivakumar, Health Minister, Dr. K M Abraham, IAS, Principal Secretary, Higher Education & other officials of Govt. of Kerala.



CMA Rakesh Singh, President of the Institute & CMA S.C. Mohanty, Vice President of the Institute called on Shri Sachin Pilot, Hon'ble Minister of State for Corporate Affairs (IC) on 1.11.2012.

November 2002



Dhananjay Joshi, CCM, making presentation at discussion meeting on Consultation Paper on Direct and Indirect Taxes submitted by the Task force. From Left: Dr. Abhyankar, Secretary General, MCC, C. Parmar, Member, Task Force; Dr. Vijay K, Chairman, Task Force; D.C. Agashe, Industrialist, Shri Majumder, Member Task Force and S.D. Majhi, Commissioner, Customs.



Meet with the Union Minister for Planning, Jayawantiben Mehta by B.V. Ramana Murthy, President, V.V. Deodhar, Past President, Dr. K.L. Jaisingh, Vice-President.

# Down The Memory Lane

November 1992



Vice President, ICWAI presenting memento to Hon'ble Minister-in- Charge, Department of Public Undertakings and Industrial Reconstruction, Govt. of West Bengal, Shri Patit Paban Pathak at the DPE ICWAI Programme on "Cost Effectiveness and Surplus Optimisation". Shri Harijiban Banerjee, Member and Shri Nirmalendu Chakraborty look on.



SAFA Seminar at Lahore, Pakistan from 17-19, November, 1992. Shri V. Kalyanaraman, Past President, SAFA with SAFA representatives from Pakistan and Bangladesh.

November 1982



National Debate on "Economic Issues in Energy Management" organized on 05th and 06th November 1982 at Oberoi Intercontinental, New Delhi

- Shri Shiv Shankar, Hon'ble Minister for Energy, Govt. of India, delivering his inaugural address.
- Keynote address delivered by Shri S. N. Roy, Chairman, Central Electricity Authority, Govt. of India.



Lecture Session on "Credit Squeeze and Afterwards" organized by the Nashik-Ojhar chapter at I.M.A. Hall, Nashik on Sunday 28th November, 1982. Shri Bhoopat Roy Seth (Senior Manager, Nashik), delivering a lecture. Others from left are: Shri V.S. Datey (Secretary), Shri Athawale (Works Manager, XLO India Ltd.) who presided the meeting; Shri Gurumoorthy (Vice- Chairman) and Shri Karzgi (Student).

Source: Extracted from the various issues of *The Management Accountant Journal*

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DIGITAL TRANSFORMATION AND SOLUTION DESIGNING WITH QUADRENNIUM OF THINKING	CMA (Dr.) Paritosh Basu	57	Sep-22	9	69-74	10.33516/maj.v57i9.68-74p
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CUSTOMER SATISFACTION IN ONLINE SHOPPING DURING THE COVID-19 PANDEMIC: AN EMPIRICAL STUDY ON COLLEGE-GOING STUDENTS	Narayan Prasad Debabrata Mitra	57	Sep-22	9	82-85	10.33516/maj.v57i9.82-85p
WHISTLE BLOWER REPORTING PRACTICES: AN INTENSIVE ANALYSIS OF SELECT INDIAN IT SECTOR COMPANIES	CMA (Dr.) Meenu Maheshwari Dr. Ashok Kumar Gupta Nupur Tiwari	57	Sep-22	9	86-89	10.33516/maj.v57i9.86-89p
IMPLEMENTING SERVICITISATION - AN EVIDENCE BASED APPROACH	Dr. Prabir Bandyopadhyay	57	Sep-22	9	90-94	10.33516/maj.v57i9.90-94p



# NEWS FROM THE INSTITUTE



Past Chairman of the Chapter (1991-93), CMA Kamala Kanta Sastri passed away on 23.09.2022 in Bhubaneswar. To pay homage to the departed soul, a condolence meeting was held on 26.09.2022 through virtual mode (Zoom platform).

The Chapter conducted an evening talk on the theme “Competition Law & Competition Commission of India” on 14th October, 2022 at CMA Bhawan, Bhubaneswar. Shri Chudamani Seth, IAS (Retd.) Former Director, Elementary Education, Govt. of Odisha and State Resource Person of Competition Commission of India and Shri Ananda Satpathy, State Resource Person of Competition Commission of India, Odisha and Retired Special Commissioner of State GST, Bhubaneswar delivered detailed lectures on the topic. CMA Santanu Kumar Rout, Chairman of Bhubaneswar Chapter earlier delivered the welcome address, CMA Saktidhar Singh, Past Chairman and Chairman PD Committee of the Chapter conducted the entire programme. CMA Surya Narayan Tripathy, Secretary of the Chapter proposed a formal Vote of Thanks. A threadbare discussion/interaction was held on the topic and more specifically on the Rules & Regulation of Competition Law and the role/responsibility of the Competition Commissioners of India.

A 12 Days Pre Placement Orientation Programme was conducted by the Chapter from 17.10.2022 to 28 October 2022. On the opening, Shri Manoj Misra, Former Chairman and Managing Director, Cement Corporation of India Ltd. and CEO, Institute for Soft Skill Development, Bhubaneswar and CMA Niranjan Mishra, Council Member and Chairman, Committee on Cost Management for Public and Govt. Services, ICAI, CMA Santanu Kumar Rout, Chairman, Bhubaneswar Chapter and CMA Mukesh Chaubey, Chairman, Training and Placement Committee, Bhubaneswar Chapter congratulated, guided and motivated the participants. After the interaction session, Shri Manoj Misra guided the participants on Interview Skills and HR Prospective. In the post lunch session CMA Shiba Prasad Padhi, Past Chairman of EIRC & Bhubaneswar Chapter and Practicing Cost Accountant deliberated and guided the participants on indirect taxation. On day 2, 18.10.2022 Shri Amit Kumar Tripathy, Soft Skill Trainer, Bhubaneswar dealt with interview skills and CV Writing. CMA Surya Narayan Tripathy, Secretary of the Chapter guided on e-filing. On day 3 (19.10.2022) Mrs. Rachana Gupta, Soft Skill Trainer, Bhubaneswar guided on GD Techniques. CA CS Abinash Parida, Lead Business Consultancy & Assurance Entity and IFRS Trainer, Bhubaneswar guided



on Ind AS. On day 4 (20.10.2022) CA Swapnabrata Dash, Practicing Chartered Accountant, Bhubaneswar dealt with Financial Management while Shri Asish Kumar Deo, Faculty Member, NIT, Bhubaneswar guided on Advance Business Excel. On day 5 (21.10.2022) CMA Soumya Ranjan Singh, Member, Bhubaneswar Chapter and Manager (Fin), TPCODL guided on SAP-FICO. Shri Asish Kumar Deo, Faculty Member, NIT, Bhubaneswar guided on Advance Business Excel. On day 6 CMA Soumya Ranjan Singh, Member, Bhubaneswar Chapter and Manager (Fin), TPCODL guided on SAP-FICO. CMA Niranjan Mishra, Council Member and Chairman, Committee on Cost and Management for Public and Government Services, ICAI guided on Cost Audit, Cost Accounting and Cost Auditing Standards. On day 7 CMA Soumya Ranjan Singh, Member, ICAI-Bhubaneswar Chapter and Manager (Fin), TPCODL guided on SAP-FICO and CMA Harihar Rath, DGM (F & A), PGCIL guided on Indirect Taxation. On day 8 (25.10.2022), CMA CS Uttam Kumar Mohallik, Advocate, Orissa High Court, Cuttack guided on Corporate Laws and Shri Amit Kumar Tripathy, Soft Skill Trainer, Bhubaneswar conducted the MOCK GD.

The Chapter organised a seminar on “Wellness Initiative, Healthy Lifestyle, Stress Management And Preventing Liver Diseases” on 21st October -2022 at the Chapter premises. Dr. Ashok Choudhury, Gastro Liver Specialist (Gurugram) delivered an informative talk and interacted on Living Initiative with Fresh Energy (LIFE). Prof.(Dr) Suwendu Narayan Mishra, Dept of Psychiatry (Sum Hospital), Bhubaneswar spoke on “Stress Management : How to Balance the Work & Life”. CMA Santanu Kumar Rout, Chairman of the Chapter delivered the welcome address and CMA Saktidhar Singh, Past Chairman and Chairman PD Committee of the Chapter facilitated the entire programme. CMA Surya Narayan Tripathy, Secretary of the Chapter proposed a vote of thanks.



THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
SOUTH ODISHA CHAPTER



The Chapter organised an evening talk on 28.09.2022 at the Chapter premises on the topic “Cost Accounting Standard & Practical Aspects in to the Cost Audit & Innovation in the Accounting Profession”. CMA Niranjana Mishra, CCM ICAI, graced the occasion as a Keynote Speaker and CMA Satya Sundar Mahasuara, Manager (Finance), NALCO graced the occasion as guest speaker and delivered a detailed talk on the topic elaborately highlighting over the various aspects of the subject of discussion. CMA Narasingha Chandra Kar, Chairman, of the Chapter welcomed the guests and invitees and briefly spoke on some basic aspects of the topic. CMA Ananda Sahu, Secretary of the Chapter also spoke on the topic. CMA Niranjana Mishra & CMA S. S. Mahasuara clarified the doubts raised by the participants. CMA Binod Bihari Nayak, Chairman, Professional Development Committee, welcomed and introduced the guests earlier and CMA Ananda Sahu, Secretary of the Chapter proposed Vote of Thanks.



NORTHERN INDIA REGIONAL COUNCIL

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
BEAWAR CHAPTER

The Chapter conducted an Industrial Visit for its students to Shree Cement Plant Beawar. More than 80 students along with several members participated in the programme. The tour was divided into two sessions. Session 1: Plant visit to understand the manufacturing process and contribution of men, material, machine and management in the process. Mr. Ankit Nagar - Dy. Manager (Process) showed all the processes and explained the importance of each process. This was followed by Session 2 wherein officials of the Administration and Costing Department of the Plant conducted a seminar to understand the Cost and Management aspects. Mr. Deepak Paliwal - Dy. General Manager (Costing) gave an overview of the business of Shree Cement Limited, its products, branches, turnover and achievements. CMA Maneesh Jain - General Manager (Purchase) gave an insight into the working of the company and how it keeps ahead of the competition. Mr. J S Gattani - General Manager (Costing) motivated the students to work hard, believe in themselves and God to do well, inspiring them with the growth story of Shree Cement Limited which started with a production of 0.5 million tonnes and will shortly be reaching 60+ million tonnes. The entire session was convened by CMA Mitesh Chopra - Dy. Manager (Taxation).

The Chapter had been awarded the first position in Best Chapter Award in “Category D” from the Northern Region for the outstanding performance during FY year 2021-22. CMA Mandeep Singh, Secretary of the Chapter, informed this in a program organized by the Northern Region of ICAI in New Delhi. The award was presented to the Founder Chairman of the Chapter CMA Rupesh Kothari and Founder Secretary CMA Mitesh Chopra by the Vice President CMA Vijender Sharma, Chairman Northern Region, CMA Shailendra Paliwal and other office bearers. CMA Ankur Singhal Vice Chairman of the Chapter, said that with the tireless efforts of the Beawar CMA members, the Chapter was established in the year 2020-21 and in the first year, the itself Chapter was awarded as Best Emerging Chapter. On receiving the award for two consecutive years CMA Manish Jain, CMA Arpit Dixit, CMA Sunil Soni, CMA Sumit Drukah, CMA Prakash Kothari, CMA Kamlesh Sankhla, CMA Mayank Pipada, CMA Ashish Jain, CMA Navneet Munot, CMA Chinmay Maheshwari, CMA Pawan Goyal, CMA Shubham Sankhla, CMA Jatin Agarwal, CMA Vitrag Kothari, CMA Ayush Mantri, CMA Deepak Jain, CMA Nikhil Jain, CMA Nikita Bhootda, CMA Aditi Gaur, CMA Aishwarya Jain, CMA Monica Jain, CMA Swati Yadav, CMA Bhagwandas Goyal,

CMA Kalpesh Hingad, CMA Ankit Jain, CMA Praveen Bhuta, CMA Piyush Duggad, Rakesh Kumawat, Rajendra Jangid, other members and students expressed happiness. Chairperson, CMA Jyoti Sarada informed that, CMA Rupesh Kothari, CMA Mitesh Chopra and CMA Lekhak Agarwal have been personally honored by presenting them “Appreciation Award” for their involvement and contribution. The Chairperson expressed her gratitude to all the Central Council Members and Regional Council Members for honoring the Chapter and members.



THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
JAIPUR CHAPTER

The Chapter organised a seminar on “Governance through Cost Accounting & Financial Statements” in association with NIRC on 18th September 2022. The Chief Guest on this occasion was CMA Shailendra Paliwal, Chairman, NIRC. Guest of Honour was CMA Santosh Pant, Secretary & Treasurer, NIRC. At the outset Chairman of the Chapter CMA Sudarshan Nahar welcomed the guests, speakers and the participants and briefed about the Chapter activities. In the first technical session, the key speaker was CMA Ravi Kumar Sahni, Past Chairman, NIRC who explained in detail the topic “Cost Audit—opportunities in New Era”. In the second technical session, the key speaker was CMA Sankalp Wadhwa, Leading Cost and Management Accounting Expert who shared his views on “Making Cost Audit Relevant for through purpose of Audit Committee Meeting”. In the third technical session, the key speaker was CMA Sanjay Arya, leading CMA in practice who explained in detail “Costing System Development and Implementation”. The program was conducted by CMA Purnima Goyal, Treasurer of the Chapter and CMA Swapnil Bhandari, Past Chairman. Secretary of the Chapter CMA (Dr.) Deepak Kumar Khandelwal thanked the guests, key speakers and the participants.

The Chapter has bagged the Best Chapter Award in Category ‘A’ of the Northern Region for the year 2021-22 in recognition of its commendable performance. On behalf of the Chapter, this Award was received by Chairman Sudarshan Nahar, Vice-Chairman CMA Harendra Kumar Pareek, Secretary CMA (Dr.) Deepak Kumar Khandelwal, Executive Members CMA S. L. Swami, CMA Swapnil Bhandari and Past Chairman CMA Rakesh Yadav, at the AGM of NIRC held at New Delhi on 26th September 2022.

The Chapter organised a pre-placement orientation program from 12th October to 22nd October 2022 for students who qualified in CMA Final examination held in June 2022, in order to train them for ensuing campus placement. The program was inaugurated on 12th October 2022 by Shri Sanjay Bansal, Executive Director (Corporate Affairs), Jaipur Metro Rail Corporation Ltd. The Guest of Honour was CS Abhishek Goswami, Chairman, ICSI Jaipur Chapter. CMA Yagya Dev Sharma, Company Secretary in Jaipur Metro Rail Corporation was the Special Invitee. Chairman CMA Sudarshan Nahar at the outset welcomed the guests and the participating budding CMAs and motivated them to take full advantage of the opportunity provided to them. In his inaugural address Shri Sanjay Bansal told from his long experience that sincerity, discipline, hard work and dedication were the key to success in life. He also shared his practical experiences and motivated the budding CMAs. In the 11 days program, experienced faculties and dignitaries

from various organisations delivered lectures on interview Skill, Group Discussion, CV writing, communication & presentation Skill & technical subjects like GST, income Tax, Cost Audit, Insolvency & Bankruptcy Code, Valuation etc. More than 80 candidates participated in the training program. The program was conducted by CMA P.D. Agarwal, Director of Coaching. At the conclusion CMA (Dr.) Deepak Kumar Khandelwal, Secretary of the Chapter thanked the guests and the participants.



## SOUTHERN INDIA REGIONAL COUNCIL



SIRC organized a Professional Development Program on the topic: “Role of CMA in HealthCare – Emerging Scenario in India” on 01.10.2022 at its premises. Guest



Speaker was CMA S. Bhargava, General Manager – Costing, Apollo Hospitals, Chennai. CMA Vijender Sharma, Vice President, ICAI, and Council Members CMA (Dr.) V. Murali and CMA (Dr.) K. Ch. A.V.S.N. Murthy, CMA Rajesh Sai Iyer, Treasurer, SIRC – ICAI attended the programme. SIRC organized a Professional Development Meeting on the Topic: “Capital Gains on Property & Shares – Tax Planning Tips, Practical Issues & Latest Developments” on 08.10.2022 at its premises. Guest Speaker was Dr. CA Abhishek Murali, President, All India Tax Payers’ Association (AITPA), Chief Guest, Dr. J. Radhakrishnan, IAS, Principal Secretary to Government, Co-operation, Food and Consumer Protection Department, Secretariat, Chennai and CMA (Dr.) V. Murali, Council Member attended the event. SIRC organized a professional Development Meeting on the topic, “CMA as an Entrepreneur” on 14.10.2022 at its premises. Guest Speaker was CMA N Shastry, Tata-Managing Director – Chennai Operations, RSM India Chennai. As directed by the Members in Industry & Placement Committee, SIRC conducted a Pre campus Orientation Program from 12.10.2022 to 22.10.2022. Sessions are conducted on various topics like Soft Skills – Interview Skills, Group Discussion, CV Writing, SAP – FICO, Advanced Business Excel, Financial Modelling, E-Filing, Direct Taxation, GST, Corporate Law & Audit (Cost Audit, Financial Audit, Internal Audit), IND AS, Cost & Financial Management Strategies, Data Analytics, Forensic Audit, Information

## INSTITUTE NEWS

System Security Audit, Job Opportunities for CMAs and HR Round for 11 days. Pre campus Orientation program concluded with valedictory function on 22.10.22 at SIRC premises. CMA P. Raju Iyer, President – ICAI, CMA Rakesh Shankar, Member, CMA Vijay Kiran Agastya, Secretary – SIRC, CMA Sankar P. Panicker, Chairman – SIRC attended the programme.

### THE INSTITUTE OF COST ACCOUNTANTS OF INDIA HYDERABAD CHAPTER



The Chapter celebrated Teachers' Day on 05th September, 2022 with great gusto and gaiety in recognition of the hard work and dedication of its faculty for student community in particular and towards the profession in general. CMA (Dr.) K.Ch.A.V.S.N. Murthy - Central Council Member – ICAI, Dr. K.V. Achalapathi - Former Professor, Dept. of Commerce, Osmania University and CMA Vijay Kiran Agastya - Secretary, SIRC-ICAI were as the guests of honour and their presence enhanced the morale of faculty and it was really inspiring.

The Chapter organised 'Telangana Commerce Student-Meet' at The Institute of Engineers (India), Visvesvaraya Bhavan, Hyderabad on September 19, 2022. Prominent personalities present were Shri Navin Mittal, IAS-Commissioner, Collegiate Education & Technical Education, Govt. of Telangana, CMA P. Raju Iyer, President, ICAI as Chief Guest" and Guest of Honour, and CMA K. Narasimha Murthy – Leading Management Consultant, as special guest. Students were awarded for their meritorious performance in academics, sports and extra-curricular activities.

The Chapter organised a joint Faculty Training Programme from 19th to 21st September 2022 in association with the Commissioner of Collegiate Education, Technical Education, Telangana at Osmania University, Hyderabad. Shri Navin Mittal, IAS-Commissioner, Collegiate Education & Technical Education, Govt. of Telangana, CMA P. Raju Iyer - President, CMA K. Someswara Babu , Chairman, CMA S. Hima Vidya -Vice Chairperson attended the inaugural session on 19th, September and addressed the participants. CMA (Dr.) K.Ch. A.V.S.N. Murthy, CCM,

CMA K. Someswara Babu ,Chairman, CMA S. Hima Vidya -Vice Chairperson addressed the participants during the closing ceremony.



### THE INSTITUTE OF COST ACCOUNTANTS OF INDIA COCHIN CHAPTER



The Chapter conducted various career guidance programmes on September 2022 in different colleges. Mr. Manoj Neelakandan was the moderator for the programme.

The Cochin Chapter of The Institute of Cost Accountants of India, and The Institute of Company Secretaries of India, along with the Ernakulam Branch of The Institute of Chartered Accountants of India, jointly organised a one-day conclave on IBC, Valuation and Forensic Audit on September 17, 2022 at Hotel Taj Gateway, Marine Drive, Ernakulam. Kerala High Court judge Bechu Kurian Thomas inaugurated the conclave. There were three technical Sessions. The First Technical Session was handled by Adv. Pawan Jhabakh, Chennai on the topic "Six years of journey of IBC and Critical Analysis of various aspects



under IBC and Stamp duty rules”. The Second Session was handled by CA, CS, CMA Gopal Krishna Raju, Chennai on the topic “Valuation of Non Financial Liabilities” and the final session was handled by CA. Kamal Garg, Mumbai and the topic was “Forensic Audit under Corporate Laws”. IBBI Executive Director Amit Pradhan, The Institute of Cost Accountants of India, Cochin Chapter, Chairman CMA Lajeesh K L, The Institute of Company Secretaries of India, Kochi Chapter Chairman CS Midhun B Shenoy and The Institute of Chartered Accountants of India, Ernakulam Branch Chairman CA K V Jose were also present.

The Chapter organised the Ninth NPG Memorial Talk on 24th September 2022 at the Chapter premises. The topic was “Risk Assessment and Estimation of Cost of Risk” and CMA Sakthimani S., Director Finance, FACT Ltd., handled the same. CMA Lajeesh K L, Chairman welcomed the gathering and CMA Renjini R, Treasurer proposed a Vote of Thanks.

The Managing Committee of the Chapter organised a programme to felicitate CMA Sankar P Panicker, newly elected Chairman of SIRC of ICAI on 24th September 2022 at the Chapter premises. CMA Lajeesh K L, Chairman presided over the function and welcomed the gathering. CMA Sunil Chacko, Past Chairman, SIRC was felicitated on the occasion.

The Corporate Laws Committee of ICAI (Cost), SIRC of ICAI (Cost), Cochin Chapter of ICAI (Cost) and the Kochi Chapter of ICSI jointly organised a one day program on the theme “Powering towards inclusive and sustainable growth- Role of Professionals” on October 22, 2022 at Hotel Raddisons Blu, Kochi. The programme was inaugurated by Justice Shri. Gopinath P, of Kerala High Court in the presence of 130 plus delegates from CS, CMA and other professions. In the inaugural ceremony CMA Thomas T V, Vice Chairman, ICAI Cochin Chapter welcomed the guests and gathering. CMA Lajeesh K L, Chairman, ICAI Cochin Chapter delivered the Presidential Address and CS Mithun B Shenoy, Chairman, ICSI Kochi Chapter proposed a Vote of Thanks. The first session was handled by Shri Venkateswaran Ramakrishnan, AGM, SEBI Mumbai on “Social Stock exchange” followed by

the second session on “ESG” by Dr. Ranjith Krishnan, NISM, Mumbai and the third session on “BRSR” by CS, CMA A Sekar, PCS, Mumbai. A Special session on Health Awareness Programme by Medical team from Lakeshore Hospital was also arranged.

**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
COIMBATORE CHAPTER**

On 5th September, 2022 an orientation programme about CMA course was conducted by the Chapter Chairman CMA Sanjeevi C. and Secretary CMA Surya Prakash U. at Karpagam University. The Chairman and Secretary made a detailed presentation about the Institute, Course Syllabus and the activities of the Chapter.

On 09th September, 2022, a similar orientation programme about CMA course was conducted by the Chapter, Secretary, CMA Surya Prakash U. at Rathinam College. The Secretary made a detailed presentation about the Institute, Course Syllabus and about the Chapter.

The Annual Festival of Cost and Management Accountants Students, an inter-collegiate event called “Cosma fest – 2022” was conducted by the Chapter on 24th September 2022 at PSG Institute of Management, Coimbatore. Competition events like ‘Business Quiz’, ‘Paper Presentation’ and Management Games were conducted. Sri Mahendra Ramdass, Managing Director – Mahendra Pumps Pvt Ltd, Coimbatore inaugurated the event. Dr.V. Sridvidya, Director – PSG Institute of Management, Coimbatore addressed the valedictory function. Students actively participated in the completion and prizes were awarded to the winners. In addition, the Chapter felicitated the proficiency winners for their outstanding performance in the examination. The festival ended with cultural events presented by students.



**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
SALEM CHAPTER**

The Chapter conducted a seminar on ‘RERA Act and its latest developments’ on 23rd September 2022 at the Chapter premises and the seminar was conducted by CMA

Dr K Nagarajan, Practicing Cost Accountant, Namakkal. The speaker explained that there are three parties concerned with this Act namely the promoter, real estate agent and allottee and dealt with their obligations under this Act, protection for the above parties, penalty for different offences etc. He also spoke on the Real Estate Regulatory Authority (RERA) and its powers to ensure compliance of the obligations of promoters, allottees and agents. The seminar concluded with an interactive session followed by vote of thanks by CMA KM Krishnamurthy, Chairman of the chapter.



**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
BENGALURU CHAPTER**



The Chapter organized professional development programmes on “Golden Relationship Among GST, Income Tax & Financial Records” on October 1, 2022 . CMA CA Ajith Sivasdas, Practicing Chartered Accountant, CMA Satish R, Chairman BCCA, CMA Raghavendra B K, Secretary BCCA, CMA Vishwanath Bhat –Vice Chairman, SIRC and CMA G N Venkataraman, Former President ICAI were the speakers.

On 15 October 2022 a meeting was organised to discuss the topics “Challenges of Cost Audit in Construction & Engineering Industries, Recent Changes in GST Laws, TDS Under Income Tax Act, 1961” at Hotel Parag, Bengaluru.



The Chief Guest was Rajesh Gopinath, Associate Director, RMZ Group. CMA Satish R, Chairman BCCA, CMA Raghavendra B K, Secretary BCCA, CMA Vishwanath Bhat, Vice Chairman , SIRC, CMA Pranabandhu Dwibedy, Treasurer, BCCA, CMA G N Venkataraman, Former President ICAI, CMA Jayarama A V, Vice Chairman BCCA, CMA Sreepada H R, PD Chairman BCCA, CMA Vijayalakshmi K R, Coaching Chairperson BCCA, CMA Manjula B.S., PF Chairperson BCCA were the speakers at the programme.

At the Student’s Programme on Dhee-Vikasa Students Study Circle Meeting – Job Costing organized by the Chapter on September 22, 2022 CMA Swapna G, CMA Vijayalakshmi K R – Coaching Chairperson BCCA, CMA Satish N, Member were the speakers.

A 11 Days Pre-Placement Orientation Programme on “Practicing Opportunities in direct, Indirect & Costing areas & Financial Modelling” was organised at Bengaluru Chapter from October 13, 2022. CMA Raghavendra B.K, Secretary BCCA, CMA Vijayalakshmi K R., Chairperson coaching, CMA G N Venkataraman, Former President ICAI, CMA Pranabandhu Dwibedy, Treasurer BCCA, CMA Manjula B.S., PF Chairperson BCCA, CMA Vishwanath Bhat SIRC Vice Chairman, CMA N R Kaushik, Former Chairman BCCA were the speakers of the programme.

“E-Filing & Corporate Laws & Audit” was the topic for discussion on October 14, 2022. CMA Kumar S. Practicing Cost Accountant, CMA Vittal K Prabhu , Practicing Cost Accountant were the speakers .

“Cost Audit, Changes in GST & TDS under IT Act, 1961” was the subject discussed on 15.10.2022 . CMA Satish R. Chairman BCCA, CMA Raghavendra B K, Secretary BCCA, CMA Vishwanath Bhat, Vice Chairman, SIRC, CMA Pranabandhu Dwibedy, Treasurer, BCCA, CMA G N Venkataraman, Former President ICAI , CMA Jayarama A V, Vice Chairman BCCA, CMA Sreepada H R., PD Chairman BCCA, CMA Vijayalakshmi K R., Coaching Chairperson BCCA, CMA Manjula B.S., PF Chairperson BCCA, Mr. Rajesh Gopinath, Associate Director, RMZ Group, CMA Prabhakar B.R. Former Chairman SIRC,



CMA Ramaskanda S., Former Chairman BCCA, CMA Jagannathan T.K., Practicing Cost Accountant, CMA Venkanna S., Former Chairman BCCA were the speakers.

SAP FICO & Data Analytics was the subject discussed on 16.10.2022. CMA Rajeev Kumar, Practicing Cost Accountant, CMA Guruprasad V., Practicing Cost Accountant were the speakers at the programme.

“Direct Taxation & Indirect Taxation” was the subject of discussion on October 17, 2022. CMA Venkanna S., Former Chairman BCCA & Practicing Cost Accountant and CMA Vijaya Kumar C S, Practicing Cost Accountant were the speakers.

“Audit in Corporate World & Information System Security Audit” was the subject of discussion on 18.10.2022. CMA A N Sriram, Practicing Cost Accountant, CA Anjan Babu, Practicing Chartered Accountant & Registered Valuer were the speakers.

“Cost Audit, Financial Audit & Internal Audit and Advanced Business Excel” was the theme discussed on 19.10.2022. CMA Ramaskanda N., Former Chairman BCCA & Practicing Cost Accountant, Mrs Rajini Singh were the speakers in this session.



### WESTERN INDIA REGIONAL COUNCIL



WIRC in association with the Department of Cooperation, Mumbai organized a workshop for Co-operative Department Officials of Mumbai on 21st September 2022 at Mumbai District Co-operative Bank, Mumbai. The Inaugural



session was attended by Mr. Bajirao Shinde, Divisional Co-Registrar Co-operative Societies, Mumbai, Mr. J. D. Patil, District Sub-Registrar Co-operative Societies, Mumbai City-1, Mr. Pratap Patil, District Sub-Registrar Co-operative Societies, Mumbai-2, Mr. Rajendra Veer, District Sub-Registrar Co-operative Society, Mumbai-3, Mr. Kailas Jeble, District Sub-Registrar Co-operative Societies, Mumbai-4, Mr. Sushil Shelar, District Special Auditor Class 1, Co-operative Societies, Mumbai. CMA Shriram Mahankaliwar, Chairman WIRC felicitated Mr. Bajirao Shinde, Divisional Co-Registrar Co-operative Societies, Mumbai by offering sapling and shawl. CMA Vinayak Kulkarni, Vice Chairman, WIRC & CMA Ashish Bhavsar were also present during the inaugural session. The First Technical Session was on “How to read Balance Sheet of Co-operative Housing Society & Credit Society with Ratio Analysis”. CMA (Dr.) Ashish P. Thatte, CCM-ICAI & Shri Madhav Prabhune, Banking Consultant were the speakers. The Second Technical Session was on “GST for Co-operative Societies” for which CMA (Dr.) Ashish P. Thatte, CCM-ICAI was the speaker. The Third Technical Session was on Income Tax for Co-operative Societies. CMA Deepak Tikekar was the speaker. The Fourth Technical Session was on Fund Flow and Cash Flow Statement and the speaker was CMA Deepak Ukidave. Smt. Rakhi Gawade, Assistant Registrar proposed Vote of Thanks. CMA Vinayak Kulkarni, Vice Chairman, WIRC coordinated the entire programme.

WIRC organized Students’ Felicitation Programme for the students who completed Foundation, Intermediate and Final from Mumbai in June 2022 examination on 22nd October 2022 at Mumbai. Shri Vijayant Rai, Business Leader, Country Head, Mumbai, Metropolitan Region, Microsoft was the Chief Guest for the programme. CMA Shriram Mahankaliwar, Chairman WIRC – ICAI, CMA Dinesh Kumar Birla, Chairman, Students, Members and Chapters Coordination Committee, WIRC – ICAI, CMA Ashish Bhavsar, Secretary, WIRC – ICAI, CMA Chaitanya Mohrir, Treasurer, WIRC – ICAI, CMA (Dr.) Ashish P. Thatte, Central Council Member – ICAI was also present on the occasion. Mementos were distributed to all



successful students by Council Members and Guest. WIRC also felicitated all the Rank holders from the Western Region on this occasion. Certificates were also distributed to fresh CMAs who participated in 12 Days Pre-Campus Orientation Programme organised by The Members in Industry and Placement Committee of the Institute in association with Western India Regional Council (WIRC).

The Members in Industry and Placement Committee of the Institute in association with Western India

Regional Council (WIRC) organized a 12 days Pre-Campus Orientation Programme for June 2022 qualified Cost Accountants during 11th October, 2022 to 22nd October 2022 at Mumbai. On First day, CMA Debasish Mitra, Chairman-Training & Placement Committee of ICAI addressed the newly qualified CMAs and guided to keep learning, getting more knowledge from various fields, analysed critically & say precisely also explained how to improve the Professional Skills and became a proud CMA. CMA Chaitanya Mohrir, Treasurer WIRC-ICAI also interacted with participants and briefed about the importance of CMAs in professional life. He guided participants about appearance for interview, be confident, importance of fluency in English in profession and also wished them Best of Luck for the upcoming Campus. There were many eminent faculties who gave detailed presentation on various topics during the scheduled days, which are useful to the participants in their professional career. A valedictory session of the Orientation Program was organized on 22nd October 2022 at Veer Savarkar Auditorium, Mumbai along with the Felicitation Programme of WIRC . The Participation Certificate were distributed to the participants who have successfully completed the 12 Days Pre- Campus Orientation Programme and felicitated with Memento in hands of Chief Guest Mr. Vijayant Rai, Country Head – BFSI, Microsoft Corporation.

**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
PUNE CHAPTER**

The Chapter organized a 7 Days Training (IOTP) for Final students from 25th September 2022 for the Session No.11 (January to June 2022) & Session 12(July to December 2022) batches for Oral & Postal students at CMA Bhawan, Karvenagar. CMA Amit Shahane & CMA Abhay Deodhar were the speakers. CMA Rahul Chincholkar, Coaching

Committee Chairman welcomed & introduced the speakers to the participants. CMA Abhay Deodhar felicitated the speaker CMA Amit Shahane and CMA Rahul Chincholkar, felicitated CMA Abhay Deodhar. CMA Amit Shahane spoke on Direct Taxation and CMA Abhay Deodhar explained the CMA's role in submitting the projects.

The Institute of Cost Accountants of India organised National CMA Practitioners Convention (NCPC-2022) on 7th & 8th October, 2022 at CMA Bhawan, Karve Nagar, ICAI-Pune Chapter premises. CMA Vijender Sharma, Vice-President, ICAI was Chairman for NCPC-2022 and CMA Neeraj Joshi, Central Council Member, ICAI was Convener for NCPC-2022. CMA P. Raju Iyer, President, ICAI, Central Council Members, CMA Niranjan Mishra, CMA Rakesh Bhalla, CMA Debasish Mitra, CMA (Dr.) V. Murali, CMA (Dr.) K Ch AVSN Murthy, CMA (Dr.) Ashish P. Thatte, CMA Ashwin G. Dalwadi, CS Makrand Lele, CA Mukesh Singh Kushwah were present on this occasion. Large number of members from WIRC, NIRC, SIRC, EIRC, various Chapter Representatives were present for the program. Program started with the Institutes' anthem and lighting of the Lamp at the hands of CMA P. Raju Iyer, President, ICAI, CMA Vijender Sharma Vice-President, ICAI, CMA Manubhai Desai, CMA Murali Soundararajan T, CMA Neeraj D. Joshi, Council Member, ICAI, CMA Shriram Mahankaliwar, Chairman, WIRC of ICAI, CMA Pallab Bhattacharya. Technical sessions were arranged on 7th and 8th October 2022. Western India Regional Council, Task Force for Women Empowerment, Lady CMA's Convention 'ASHTABHUJA - WOMEN IN LEADERSHIP' was arranged on 8th October 2022 after the NCPC 2022. CMA P. Raju Iyer, President, ICAI, CMA Shriram Mahankaliwar, Chairman, WIRC of ICAI, CMA Vinayak B. Kulkarni, Vice Chairman, WIRC of ICAI, CMA Chaitanya Mohrir, Treasurer, WIRC of ICAI, CMA Ashishkumar S. Bhavsar, Secretary, WIRC of ICAI, CMA Dineshkumar Birla, RCM, WIRC of ICAI, Guest of Honour-CMA Sanjali Dias, Senior Vice-President, GSTN, Guest of Honour-CMA Geeta Sharma, Director Finance, HLL, Chief Guest-CMA Ulka Kalaskar, Joint Municipal Commissioner, Chief Accounts & Finance Officer-Pune Municipal Corporation, CMA Meena Vaidya, Advisor, ICAI-Pune Chapter, CMA Dr. Madhuvanti Sathe, Past Chairperson, ICAI-Pune Chapter were present for the program. The Chapter arranged a felicitation program of Mr. Jayawant Sorate, Coordinator on the occasion of his





retirement on 20th October 2022. CMA (Dr.) D. V. Joshi, Past President of ICAI, CMA Amit Apte, Past President, CMA D.V. Patwardhan, CMA (Dr.) S. U. Gawade & CMA Pramodkumar Dubey, Past Chairman, ICAI-Pune Chapter, CMA Prasad Joshi, Chairman, ICAI-Pune Chapter, CMA Nagesh Bhagane, Secretary, CMA Nilesh Kekan, Treasurer, CMA Meena Vaidya, Advisor, ICAI-Pune Chapter and staff with Mr. Jayawant Sorte's family were present on this occasion. CMA D. V. Patwardhan, Past Chairman, ICAI-Pune Chapter felicitated him by offering Shawl and Shrifal. CMA Amit Anand Apte, Past President, felicitated Mr. Jayawant (Sanjay) Sorate with gift and CMA Meena Vaidya, Advisor, ICAI-Pune Chapter, felicitated Mrs. Sorate with Saree. CMA (Dr.) D. V. Joshi, Past President of ICAI, delivered his thanks to Mr. Jayawant Sorte for his sincere and honest work, cooperative nature etc. CMA (Dr.) D. V. Joshi also thanked all the staff members for their efforts and relation with Pune Chapter. CMA Chaitanya Mohrir, Treasurer, WIRC, ICAI gave his best wishes to Mr. Jayawant and also recalled some memories with him when he was a student. CMA Amit Shahane, faculty member of ICAI-Pune Chapter also shared some experience with Sorate Sir. The Chapter arranged 'Diwali Pahat' program on 24th October 2022 at CMA Bhawan, Auditorium, 3rd floor, Karvenagar Pune. Diwali Pahat program started with lighting of lamp at the hands of CMA (Dr.) Dhananjay V. Joshi, Past President, ICAI, CMA Chaitanya Mohrir - Regional Council member, WIRC of ICAI, CMA Milind Date, CMA Prasad Joshi,



Chairman, ICAI-Pune Chapter, CMA Nagesh Bhagane, Secretary, ICAI-Pune Chapter, CMA Meena Vaidya, Advisor, ICAI-Pune Chapter. CMA Amit Shahane was the organiser for the programme.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
NAVI MUMBAI CHAPTER



The Chapter conducted an Offline CEP programme on "Development of Enterprise and Services Hub (DESH) Bill 2022" on 25th September 2022 at KB Patil College Conference Hall. The speaker was CMA Amit Sarker Partner, Deloitte Touche Tomhatsu India LLP. CMA Vivek Bhalerao, PD Committee Chairman of the Chapter welcomed the gathering and introduced the speaker and emphasized the importance on knowing the provisions of DESH Bill 2022 which is a Draft bill for replacing the SEZ Act. The lucid presentation and the interactive workshop concluded with the esteemed speaker being felicitated by the Chairman of the Chapter CMA Vaidyanathan Iyer and a Vote of Thanks proposed by CMA Debasish Mitra, CCM of the Institute.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
AHMEDABAD CHAPTER

CGST commissioner Shri Shiv Kumar Sharma invited Chairman CMA Malhar Dalwadi and Ahmedabad Chapter representatives to present before them to understand the provisions of the Companies (Cost Audit and Records) Rule, 2014, and the use of Cost Audit reports during the course of a departmental audit by AG officers. The representation made by CCM CMA Ashwin G. Dalwadi, Chairman of Chapter, CMA Malhar Dalwadi, Secretary of Chapter. CMA Mitesh



Prajapati, Member CMA Vikas Agrawal and CMA Anuj Agrawal met the CGST Commissioner Shri Shiv Kumar Sharma on 22nd September 2022 and explain the importance of Cost Audit report during the course of a departmental audit by AG officers.

The Chapter organized Press Meet on 28th September 2022 in connection with the results of the June'22 examinations intermediate and final. Reporters from leading electronic media and print media attended the press meet. The Chairman, CMA Malhar Dalwadi & Secretary & Chairman Oral Coaching Committee, CMA Mitesh Prajapati addressed the electronic media and print media.

The Chapter organized 12 days Pre-placement Orientation Program for June'22 qualified CMAs from 12th October'2022 to 22nd October'2022. In an inaugural function of the Orientation program on 12th Oct'2022, CMA Harshendra Punjawat - CFO, Zydus Hospira Oncology Pvt. Ltd was the chief guest. CMA Mitesh Prajapati, Secretary of the Chapter welcomed all dignitaries. CMA Nikunj Shah, Chairman-Training & Placement committee of the chapter introduced the dignitaries on the dais. CCM CMA Ashwin G. Dalwadi felicitates Chief Guest CMA Harshendra Punjawat by offering memento and bouquet. CMA Malhar Dalwadi, Chairman of Chapter, RCM & Secretary-WIRC CMA Ashish Bhavsar, and CCM CMA Ashwin G. Dalwadi gave a special occasion speech. CMA Harshendra Punjawat, Chief Guest gave an inspirational speech to the participants and information about the importance of CMAs in the corporate world. There were many eminent faculties who gave detailed presentation on various topics during the scheduled days, which are useful to the participants in their professional careers.

A valedictory session of the Orientation Program was organized on 22nd October'2022. CMA Naveen Pujara was the Chief Guest of the valedictory session of the Orientation Program. CMA Malhar Dalwadi, Chairman of the Chapter, CMA Dakshesh Choksi, Vice Chairman, and CMA Kushal Desai, Treasurer of the Chapter were present in the valedictory session. CMA Naveen Pujara, Chief Guest gave a speech on the importance of this program. The participants were felicitated with a "Certificate of Participation" by the dignitaries.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA  
PIMPRI CHINCHWAD AKURDI CHAPTER

The Chapter conducted a webinar on 'Profit Optimization through MIS Report' on 24th September 2022 at 6:00pm to 8:00pm through Google Digital platform. CMA Pradeep Deshpande, Vice-Chairman of the Chapter welcomed and introduced the CMA Rajesh Kapadia, Independent Director (IICA), Additional General Manager (Finance), Gujarat Alkalies and Chemicals Ltd., Vadodara (Gujarat). CMA Rajesh Kapadia mentioned about Chief / Principal determinants of Profitability, Sales - which will interalia define the Top Line & Bottom Line for the Company, Production - that is required for sustainable Sales and for optimisation of available resources, Raw Materials - In many Industries, this constitutes major cost component of the Product etc. Question-Answer session was conducted during the session. There was overwhelming response from practicing members, members from the industries, professionals and students. The Chapter conducted webinar on 'Spirituality for Excellence' on 15th October 2022 at 6:00pm to 8:00pm through Google Digital platform. CMA Pradeep Deshpande, Vice-Chairman of PCA Chapter welcomed and introduced the CMA Dhananjay Kumar Vatsyayan. Chairman, The ICAI - PCA Chapter and Practicing Cost Accountant. CMA Dhananjay Kumar Vatsyayan in his speech said, spirituality can be defined generally as an individual's search for ultimate or sacred meaning and purpose in life. Question-Answer session was conducted during the session. The Chapter conducted Career Counselling Program on 20th October 2022 for the students of Sanghavi-Kesari College of Arts, Science & Commerce College at Pimpri-Chinchwad. Prof. Promod Shinde, Head of Commerce Department welcomed the Principal Dr. G. L. Bhong and all participants. Principal Dr. G. L Bhong shared his valuable thoughts during the session. He focused on what is the role of CMAs in manufacturing companies. Career Guidance Program started with the Video Clip about CMA Course. CMA Lalitha Deepak delivered lecture informing students about Foundation, Intermediate and Final levels of the course. He informed students about large employment opportunities in Govt. and Private sector after completing the CMA Course. She shared a story about how she had succeeded in her life after becoming a CMA (Dr.) Bhong said this is really informative presentation about the course.



## DIRECT TAXES

- Notification No. 112/2022 Dated 7<sup>th</sup> October 2022:** In exercise of the powers conferred by section 285BA read with section 295 of the Income-tax Act, 1961 (43 of 1961), the Central Board of Direct Taxes hereby makes the rules further to amend the Income-tax Rules. In the Income-tax Rules, 1962, in rule 114F, in sub-rule (5), for clauses (i), (j) and (k), the following shall be substituted, namely: “(i) a financial institution with a local client base, in case of any U.S. reportable account; (j) a local bank, in case of any U.S. reportable account; (k) a financial institution with only low value accounts, in case of any U.S. reportable account.
- Notification No. 113/2022 Dated 13<sup>th</sup> October 2022:** In exercise of the powers conferred by sub-sections (1) and (2) of section 120 of the Income-tax Act, 1961 (43 of 1961), the Central Board of Direct Taxes authorized Principal Chief Commissioners of Income-tax specified in column (2) of Schedule to the notification number S.O. 2907(E) dated the 13th November, 2014, to issue orders in writing for the exercise of the powers and performance of the functions by all or any of the income-tax authorities specified in column (4) of the Schedule annexed to the said notification. The Principal Chief Commissioners of Income-tax authorized under the said notification issued orders to the respective Commissioners of Income-tax (Appeals) under their respective jurisdiction. In exercise of the powers conferred by sub-section (1) read with sub-section (3) of section 120 of the Income-tax Act, 1961 (43 of 1961), the Central Board of Direct Taxes hereby directs that the Commissioner of Income-tax (Appeal) specified in column (2) of the Schedule annexed hereto, having their headquarters at the places specified in corresponding entries in column (3) of the Schedule, shall exercise the powers and perform the functions in respect of appeals arising under section 246A and 248 of the Act, filed in cases of classes of cases specified in column (5) of the Schedule and falling within the jurisdiction of the Income-tax authorities specified in column (4) of the Schedule.
- Notification No. 114/2022 Dated 13<sup>th</sup> October 2022:** In exercise of powers conferred by sub-clause (iv) of clause (c) of the Explanation 1 to clause (23FE) of section 10 of the Income-tax Act, 1961 (43 of 1961) (hereinafter referred to as the “Act”), the Central Government hereby specifies the pension fund, namely, 2589555 Ontario Limited (PAN: AABCZ1393D), (hereinafter referred to as “the assessee”) as the specified person for the purposes of the said clause in respect of the eligible investment made by it in India. Violation of any of the conditions as stipulated in the said clause (23FE) of section 10 of the Act and this notification shall render the assessee ineligible for the tax exemption.
- Notification No. 115/2022 Dated 14<sup>th</sup> October 2022:** In exercise of powers conferred by sub-clause (vi) of clause (b) of the Explanation 1 to clause (23FE) of section 10 of the Income-tax Act, 1961 (43 of 1961) (hereinafter referred to as the “Act”), the Central Government hereby specifies the sovereign wealth fund, namely, Norges Bank On Account Of The Government Pension Fund Global (PAN: AACCN1454E), (hereinafter referred to as “the assessee”) as the specified person for the purposes of the said clause in respect of the investment made by it in India on or after the date of publication of this notification in the Official Gazette but on or before the 31st day of March, 2024 (hereinafter referred to as “the said investments”) subject to the fulfilment of the conditions. Violation of any of the conditions as stipulated in clause (23FE) of section 10 of the Act and this notification shall render the assessee ineligible for the tax exemption.
- Notification No. 116/2022 Dated 19<sup>th</sup> October 2022:** In exercise of the powers conferred by clause (46) of section 10 of the Income-tax Act, 1961 (43 of 1961), the Central Government hereby notifies for the purposes of the said clause, ‘H P Electricity Regulatory Commission’ (PAN AAJH0378N), a Commission constituted by the Government of Himachal Pradesh, in respect of the following specified income arising to that Commission:

  - (a) amount received in the form of Government grants;
  - (b) amount received as license fee from licensees in electricity;
  - (c) amount received as Court fee or petition fee; and
  - (d) interest earned on investments made out of (a) to (c) above.

This notification shall be effective subject to the conditions that H P Electricity Regulatory Commission: - (a) shall not engage in any commercial activity; (b) activities and the nature of the specified income shall remain unchanged throughout the financial years; and (c) shall file return of income in accordance with the provision of clause (g) of sub-section (4C) of section 139 of the Income-tax Act, 1961.
- Notification No. 117/2022 Dated 19<sup>th</sup> October 2022:** In exercise of the powers conferred by clause (46) of section 10 of the Income-tax Act, 1961 (43 of 1961), the Central Government hereby notifies for the purposes of the said clause, Kerala State Electricity Regulatory Commission (PAN: AAALK1634N), a Commission established by the State Government of Kerala, in respect of the following specified income arising to that Commission:

  - (a) Amount received in the form of grants and loans received from State Government of Kerala;
  - (b) License fees under Electricity Act, 2003;
  - (c) Petition fees under Electricity Act, 2003; and
  - (d) Interest earned on investments made out of (a), (b) & (c) above.

The provisions of this notification shall be effective subject to the conditions that Kerala State Electricity Regulatory Commission, - (a) shall not engage in any commercial activity; (b) activities and the nature of the specified income remain unchanged throughout the financial years; and (c) shall file returns of income in accordance with the provision of clause (g) of sub-section (4C) section 139 of the Income-tax Act, 1961.
- Notification No. 118/2022 Dated 28<sup>th</sup> October 2022:** In exercise of the powers conferred by clause (iii) of sub-section (1) of section 35 of the Income-tax Act, 1961 (43 of 1961) read with Rules 5C and 5E of the Income-tax Rules, 1962, the Central Government hereby

approves 'Krea University, Sricity, Chittoor, A.P. (PAN: AAFAK4100P)' under the category of 'University, College or other institution' for research in 'Social science or Statistical research' for the purposes of clause (iii) of sub-section (1) of section 35 of the Income-tax Act, 1961 read with rules 5C and 5E of the Income-tax Rules, 1962.

- **Notification No. 119/2022 Dated 31<sup>st</sup> October 2022:** In exercise of the powers conferred by sub-clause (iv) of clause (c) of the Explanation 1 to clause (23FE) of section 10 of the Income-tax Act, 1961 (43 of 1961) (hereinafter referred to as the —Act), the Central Government hereby specifies the pension fund, namely, Teacher Retirement System of Texas (PAN: AAATT9387R), (hereinafter referred to as —the assessee) as the specified person for the purposes of the said clause in respect of the eligible investment made by it in India on or after the date of publication of this notification in the Official Gazette but on or before the 31st day of March, 2024 (hereinafter referred to as —the said investment) subject to the fulfillment of the conditions. Violation of any of the conditions as stipulated in the said clause (23FE) of section 10 of the Act and this notification shall render the assessee ineligible for the tax exemption.
- **Circular No. 20/2022 dated 26<sup>th</sup> October 2022:** Extension of due date for furnishing return of income for the Assessment Year 2022-23. In consequence to extension of due date for various reports of audit in the case of assesses referred in clause (a) of Explanation 2 to sub-section (I) of section 139 of the Act to 07th October 2022 by Circular No. 19/2022 dated 30.09.2022, Central Board of Direct Taxes (CBDT), in exercise of its powers under Section 119 of the Income-tax Act, 1961 (Act), extends the due date of furnishing of Return of Income under sub-section (1) of section 139 of the Act for the Assessment Year 2022-23, which is 31<sup>st</sup> October 2022 in the case of assesses referred in clause (a) of Explanation 2 to sub-section (I) of section 139 of the Act, to 07th November, 2022.
- **Circular No. 21/2022 dated 28<sup>th</sup> October 2022:** On consideration of difficulties arising in timely filing of TDS statement in Form 26Q on account of revision of its format and consequent updation required for its filing, the Central Board of Direct Taxes, in exercise of its powers under section 119 of the Income Tax Act, 1961, hereby extends the due date of filing of Form 26Q for the second quarter of financial year 2022-23 from 31<sup>st</sup> of October, 2022 to 30th of November, 2022.

## INDIRECT TAXES

### GST

- **Notification No.21/2022 –CENTRAL TAX dated 21<sup>st</sup> October 2022:** In exercise of the powers conferred by sub-section (6) of section 39 of the Central Goods and Services Tax Act, 2017 (12 of 2017), the Commissioner, on the recommendations of the Council, hereby extends the due date for furnishing the return in FORM GSTR-3B, for the registered persons required to furnish return under sub-section (1) of section 39 read with clause (i) of sub-rule (1) of rule 61 of the Central Goods and Services Tax Rules, 2017, for the month of September, 2022 till the 21<sup>st</sup> day

of October, 2022.

### CUSTOMS

- **Notification No. 52/2022-Customs dated 3<sup>rd</sup> October 2022:** In exercise of the powers conferred by sub-section (1) of section 25 of the Customs Act, 1962 (52 of 1962) and sub-section (12) of section (3) of the Customs Tariff Act, 1975 (51 of 1975), the Central Government, being satisfied that it is necessary in the public interest so to do, hereby makes the following further amendments in the notification of the Government of India, Ministry of Finance (Department of Revenue), No. 50/2017-Customs, dated the 30th June, 2017. In the said notification, in the Table, against S. No. 364B, in column (2), for the entry “7107 00 00, 7109 00 00, 7110, 7111 00 00, 7112, 7118”, the entry “7107 00 00, 7109 00 00, 7111 00 00, 7112, 7118” shall be substituted.
- **Notification No. 53/2022-Customs dated 3<sup>rd</sup> October 2022:** In exercise of the powers conferred by sub-section (1) of section 25 of the Customs Act, 1962 (52 of 1962) read with section 124 of the Finance Act, 2021 (13 of 2021), the Central Government, on being satisfied that it is necessary in the public interest so to do, hereby makes the following further amendments in the notification of the Government of India, in the Ministry of Finance (Department of Revenue), No. 11/2021-Customs, dated the 1st February, 2021.

In the said notification, in the Table, after Sl. No. 15 and the entries relating thereto, the following S. Nos. and entries shall be inserted:

15A	7110	Goods, other than the following: - (a) Platinum and Palladium for use in the manufacture of: - (i) all goods, including Noble Metal Compounds and Noble Metal Solutions, falling under heading 2843; (ii) all goods falling under sub-heading 3815 12; (iii) catalytic converters falling under tariff item 8421 32 00; Provided that, the importer follows the procedure set out in the Customs (Import of Goods at Concessional Rate of Duty or for Specified End Use) Rules, 2022; (b) Rhodium	1.5%
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- **Notification No. 54/2022-Customs dated 19<sup>th</sup> October 2022:** In exercise of the powers conferred by section 157 of the Customs Act, 1962 (52 of 1962), the Central Board of Indirect Taxes and Customs hereby makes the following regulations further to amend the Project Imports Regulations, 1986. In the Project Imports Regulations, 1986, in the Table, (i) against Sr. No. 2, in column 2, for the words “All

Power Plants and Transmission Projects”, the words“ All Power Plants and Transmission Projects, other than solar power plants or solar power projects,” shall be substituted;

(ii) against Sr. No. 3, in column 2,for the words, figures and symbols “Power Plants & Transmission Projects other than those mentioned at Sl. No. 2 above.” ,the words, figures and symbols“ Power Plants and Transmission Projects, other than solar power plants or solar power projects and other than those mentioned at Sr. No. 2 above.” shall be substituted;

(iii) against Sr. No. 3FF, in columns 2 and 3, after item (xi)and the entries relating thereto, the following items and entries shall be inserted

(xii) Bhopal Metro Rail Project	Managing Director, Madhya Pradesh Metro Rail Corporation Limited (MPMRCL)
xiii) Indore Metro Rail Project	Managing Director, Madhya Pradesh Metro Rail Corporation Limited (MPMRCL)

- **Notification No. 55/2022-Customs dated 31<sup>st</sup> October 2022:** In exercise of the powers conferred by sub-section (1) of section 25 of the Customs Act, 1962 (52 of 1962), the Central Government, on being satisfied that it is necessary in the public interest so to do, hereby exempts the goods of the description specified in column(3) of the Table below, falling within the Chapter, heading, sub-heading or tariff item of the Second Schedule to the Customs Tariff Act, 1975 (51 of 1975), specified in the corresponding entry in column (2) of the said Table, when exported out of India, from so much of the duty of customs leviable thereon under the said Second Schedule as is in excess of the amount calculated at the rate specified in the corresponding entry in column (4) of the said Table, subject to any of the condition(s),specified in the Annexure to this notification, the condition number(s) of which is mentioned in the corresponding entry in column (5) of the said Table:

Sl No	Chapter or heading or sub-heading or tariff item	Description of Goods	Rate of Duty
1	100610	Rice in the husk (paddy or rough)	Nil
2	100620	Husked (brown) rice	Nil
3	10063090	Semi-milled or wholly-milled rice, whether or not polished or glazed(other than Parboiled rice and Basmati rice)	Nil
4	1006	Organic Non-Basmati Rice	Nil

**EXCISE**

- **Notification No. 32/2022-Central Excise dated 1<sup>st</sup> October:** In exercise of the powers conferred by section 5A of the Central Excise Act, 1944 (1 of 1944)read with section 147 of the Finance Act, 2002 (20 of 2002), the Central Government, on being satisfied that it is necessary in the public interest so to do, hereby makes the following further amendments in the notification of the Government of India in the Ministry of Finance (Department of Revenue), No. 18/2022-Central Excise, dated the 19thJuly, 2022. In the said notification, in the Table,-(i) against S. No. 1, for the entry in column (4), the entry “Rs. 8,000per tonne” shall be substituted;(ii) against S. No. 2, for the entry in column (4), the entry “Nil” shall be substituted.
- **Notification No. 33/2022-Central Excise dated 1<sup>st</sup> October:** In exercise of the powers conferred by section 5A of the Central Excise Act, 1944 (1 of 1944) read with section 147 of Finance Act, 2002 (20 of 2002), the Central Government,on being satisfied that it is necessary in the public interest so to do, hereby makes the following further amendments in the notification of the Government of India in the Ministry of Finance (Department of Revenue), No. 04/2022-Central Excise, dated the 30thJune, 2022.In the said notification, in the Table, (i)against S. No. 2, for the entry in column (4), the entry “Rs. 3.50per litre” shall be substituted.
- **Notification No. 34/2022-Central Excise dated 15<sup>th</sup> October:** In exercise of the powers conferred by section 5A of the Central Excise Act, 1944 (1 of 1944)read with section 147 of the Finance Act, 2002 (20 of 2002), the Central Government, on being satisfied that it is necessary in the public interest so to do,hereby makes the following further amendments in the notification of the Government of India in the Ministry of Finance (Department of Revenue), No. 18/2022-Central Excise, dated the 19thJuly, 2022.  
In the said notification, in the Table,-(i)against S. No. 1, for the entry in column (4), the entry “Rs. 11,000 per tonne” shall be substituted;(ii)against S. No. 2, for the entry in column (4), the entry “Rs. 3.50 per litre” shall be substituted.
- **Notification No. 35/2022-Central Excise dated 15<sup>th</sup> October:** In exercise of the powers conferred by section 5A of the Central Excise Act, 1944 (1 of 1944) read with section 147 of Finance Act, 2002 (20 of 2002), the Central Government, on being satisfied that it is necessary in the public interest so to do, hereby makes the following further amendments in the notification of the Government of India in the Ministry of Finance (Department of Revenue), No. 04/2022-Central Excise, dated the 30thJune, 2022. In the said notification, in the Table,-(i)against S. No. 2, for the entry in column (4), the entry “Rs. 10.50 per litre” shall be substituted.
- **Circular No.1085/06/2022-CX dated 31<sup>st</sup> October 2022:** Mechanism for implementation of additional basic excise duty @Rs. 2 per litre levied on sale of unblended motor spirit (commonly known as petrol). **MA**

Sources: [incometax.gov.in](http://incometax.gov.in), [cbic.gov.in](http://cbic.gov.in)



**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA**  
(STATUTORY BODY UNDER AN ACT OF PARLIAMENT)

**TIME TABLE & PROGRAMME- DECEMBER 2022**

**FOUNDATION COURSE EXAMINATION**  
(Multiple Choice Questions)

Day & Date	Foundation Course Examination Syllabus-2016	
	Time 10.00 A.M. to 12.00 Noon. Paper – 1 & 2 (200 Marks)	Time 2.00 P.M. to 4.00 P.M. Paper – 3 & 4 (200 Marks)
Friday, 13th January, 2023	<b>Paper – 1 :</b> Fundamentals of Economics & Management (100 Marks 50 Multiple Choice Questions)  <b>Paper – 2 :</b> Fundamentals of Accounting (100 Marks 50 Multiple Choice Questions)	<b>Paper – 3 :</b> Fundamentals of Laws & Ethics (100 Marks 50 Multiple Choice Questions)  <b>Paper – 4 :</b> Fundamentals of Business Mathematics & Statistics (100 Marks 50 Multiple Choice Questions)

The Institute has decided to conduct December 2022 Foundation Examination through online mode using mobile / laptop / desktop /tab from their home only.

**Examination Fees**

Foundation Course Examination	Inland Candidate	₹1200/-
	Overseas Candidate	US \$ 60

1. Application Forms for Foundation Examination has to be filled up through online and fees will be accepted through online mode (including Payfee Module of IDBI Bank).
2. STUDENTS FROM OVERSEAS HAVE TO APPLY OFFLINE AND SEND DD ALONGWITH THE FORM.
3. (a) Students can login to the website [www.icmai.in](http://www.icmai.in) and apply online through payment gateway by using Credit/Debit card or Net banking.  
(b) Students can also pay their requisite fee through pay-fee module of IDBI Bank.
4. Last date for receipt of Examination Application Forms is 13<sup>th</sup> November, 2022.
5. The Foundation Examination will be conducted in M.C.Q Mode through online from home.
6. Each paper will carry 100 marks 50 Multiple Choice Questions (Each Question will carry 2 Marks). Each session will have a total of 100 Multiple Choice Questions of 200 marks.
7. All Candidates/students are encouraged to appear in the Foundation examination through online mode using mobile/laptop/desktop/tab from their home.
8. Candidates/students are requested to appear the Foundation Examination from their home only by logging within the time span given. Login credentials and URL link will be given in due time.
9. It may be noted that if any candidate/student gets disconnected while taking the examination, they may login again in the same device to finish the rest of the examination.
10. A candidate/student who is completing all conditions for appearing in the examination as per Regulations will only be allowed to appear for the examination.
11. Probable date of publication of result: To be announced in due course.

\* The Candidates/students are advised to keep regularly in touch with the website of the Institute for further notifications and announcements relating to Foundation Examination of December 2022 and in case of any query or clarification can e-mail us at- [exam.helpdesk@icmai.in](mailto:exam.helpdesk@icmai.in)

CMA Kaushik Banerjee  
Secretary



**THE INSTITUTE OF COST ACCOUNTANTS OF INDIA**  
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**INTERMEDIATE AND FINAL EXAMINATION TIME TABLE & PROGRAMME – DECEMBER 2022**

**PROGRAMME FOR SYLLABUS 2016**

**ATTENTION: INTERMEDIATE & FINAL EXAMINATION (DECEMBER – 2022 TERM) WILL BE HELD ON ALTERNATE DATES FOR EACH GROUP.**

Day & Date	INTERMEDIATE		FINAL	
	(Group – I) (Time: 10.00 A.M. to 01.00 P.M.)	(Group – II) (Time: 2.00 P.M. to 5.00 P.M.)	(Group – III) (Time: 2.00 P.M. to 5.00 P.M.)	(Group – IV) (Time: 2.00 P.M. to 5.00 P.M.)
Thursday, 5th January, 2023	Financial Accounting (P-05)	Operations Management & Strategic Management (P-09)	Corporate Laws & Compliance (P-13)	Corporate Financial Reporting (P-17)
Friday, 6th January, 2023				
Saturday, 7th January, 2023	Laws & Ethics (P-06)		Strategic Financial Management (P-14)	
Sunday, 8th January, 2023		Cost & Management Accounting and Financial Management (P-10)		Indirect Tax Laws & Practice (P-18)
Monday, 9th January, 2023	Direct Taxation (P-07)		Strategic Cost Management – Decision Making (P-15)	
Tuesday, 10th January, 2023		Indirect Taxation (P-11)		Cost & Management Audit (P-19)
Wednesday, 11th January, 2023	Cost Accounting (P-08)		Direct Tax Laws and International Taxation (P-16)	
Thursday, 12th January, 2023		Company Accounts & Audit (P-12)		Strategic Performance Management and Business Valuation (P-20)

	Final Examination	Intermediate Examination
One Group (Inland Centres) (Overseas Centres)	1400/- US \$ 100	1200/- US \$ 90
Two Groups (Inland Centres) (Overseas Centres)	2800/- US \$ 100	2400/- US \$ 90

- Application Forms for Intermediate and Final Examination has to be filled up through online only and fees will be accepted through online mode only (including Payfee Module of IDBI Bank). No Offline form and DD payment will be accepted for domestic candidate.
- STUDENTS OPTING FOR OVERSEAS CENTRES HAVE TO APPLY OFFLINE AND SEND DD ALONG WITH THE FORM.
- Students can login to the website [www.icmai.in](http://www.icmai.in) and apply online through payment gateway by using Credit/Debit card or Net banking.
- Students can also pay their requisite fee through pay-fee module of IDBI Bank.
- Last date for receipt of Examination Application Forms is 5<sup>th</sup> November, 2022.
- The mode of examination will be offline-centre based.
- The provisions of Direct Tax Laws and Indirect Tax Laws, as amended by the Finance Act, 2021, including notifications and circulars issued up to 31<sup>st</sup> May, 2022, are applicable for December, 2022 term of examination for the Subjects Direct Taxation, Indirect Taxation (Intermediate), Direct Tax laws and International Taxation and Indirect Tax Laws & Practice (Final) under Syllabus 2016. The relevant Assessment Year is 2022-23. For statutory updates and amendments please refer to the link: <https://icmai.in/studentswebsite/Syllabus2016a.htm>
- Companies (Cost Records and Audit) Rules, 2014 as amended up to 31<sup>st</sup> May, 2022 are applicable for December, 2022 term of examinations for Paper 12- Company Accounts and Audit (Intermediate) and Paper 19 - Cost and Management Audit (Final) under Syllabus 2016. For updates and amendments please refer to the link: <https://icmai.in/studentswebsite/Syllabus2016a.htm>
- The provisions of the Companies Act 2013 are applicable for Paper 6 - Laws and Ethics (Intermediate) and Paper 13 - Corporate Laws and Compliance (Final) under Syllabus 2016 to the extent notified by the Government of India up to 31<sup>st</sup> May, 2022 are applicable for December, 2022 term of examinations. For applicability of ICDR, 2018 for Paper 13 - Corporate Laws & Compliance (Final) under Syllabus 2016 please refer to the link: <https://icmai.in/studentswebsite/Syllabus2016a.htm>
- For amendments in ISD AS and AS under Syllabus 2016 for Paper 5 - Financial Accounting, Paper 12 - Company Accounts and Audit (Intermediate) and Paper 17 - Corporate Financial Reporting (Final), applicable for December, 2022 term of examinations please refer to the link: <https://icmai.in/studentswebsite/Syllabus2016a.htm>
- Pension Fund Regulatory and Development Authority Act, 2013 already been included in Paper 6-Laws and Ethics (Intermediate) and Insolvency and Bankruptcy Code 2016 already included in Paper 13 - Corporate Laws and Compliance (Final) under Syllabus 2016 for December, 2022 term of examinations. Please refer to the link: <https://icmai.in/studentswebsite/Syllabus2016a.htm>
- Examination Centres: Adipur-Kacheh (Gujarat), Agartala, Agra, Ahmedabad, Akurdi, Allahabad, Angul Talcher, Asansol, Aurangabad, Bangalore, Bankura, Baroda, Berhampur – Ganjam (Odisha), Bharuch Anklshwar, Bhilai, Bhiwara, Bhopal, Bower City(Rajasthan), Bhubaneswar, Bilaswar, Bikaner (Rajasthan), Bokaro, Calicut, Chandigarh, Chennai, Coimbatore, Cuttack, Dindigul, Dehradun, Delhi, Dhanbad, Dullajan (Assam), Durgapur, Ernakulam, Erode, Faridabad, Ghaziabad, Guntur, Gurgaon, Guwahati, Haridwar, Hazaribagh, Hosur, Howrah, Hyderabad, Indore, Jaipur, Jabalpur, Jalandhar, Jammu, Jamshedpur, Jodhpur, Kalyan, Kannur, Kampur, Kolhapur, Kolkata, Kollam, Kota, Kottakkal (Malappuram), Kottayam, Lucknow, Ludhiana, Madurai, Mangalore, Meerut, Mumbai, Mysore, Nagpur, Nalhati, Nasik, Nellore, Neyveli, Noida, Palakkad, Panaji (Goa), Patiala, Patna, Pondicherry, Port Blair, Pune, Raipur, Rajahmundry, Ranchei, Rourkela, Salem, Sambalpur, Shillong, Shimla, Siliguri, Solapur, Srinagar, Surat, Thrissur, Tiruchirappalli, Tirunelveli, Tirupati, Tiruvandur, Udaipur, Vapi, Vashi, Vellore, Vijayawada, Vinodhyangar, Walkair and Overseas Centres at Bahrain, Dubai and Muscat.
- A candidate who is fulfilling all conditions specified for appearing in examination will only be allowed to appear for examination.
- Probable date of publication of result: 17<sup>th</sup> March 2023.

\* The candidates/students are advised to keep regularly in touch with the website of the Institute for further notifications and announcements relating to Examination of December 2022 and in case of any query or clarification can e-mail us only at [exam.helpdesk@icmai.in](mailto:exam.helpdesk@icmai.in)

CMA Kaushik Banerjee  
Secretary



# THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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# Benevolent Fund

## FOR THE MEMBERS OF THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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The Fund has been created to provide outright grant of prescribed amount to the member in the event of critical illness of a member / beneficiary of the Fund. It is also for outright grant of prescribed amount to the beneficiary in the event of death of a member of the Fund.

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- ⊙ **Outright grant not exceeding ₹3,00,000.00/- in each case to the beneficiary in the event of death of the member.**
- ⊙ **Outright grant not exceeding ₹1,50,000.00/- in each case to the member and beneficiary for critical illness duly certified by the doctor under whom the treatment is continuing.**

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- ⊙ Coronary Artery Bypass Graft Surgery
- ⊙ Stroke / Cerebral Attack / Paralysis
- ⊙ Heart Valve Replacement Surgery
- ⊙ Myocardial Infarction (heart attack) / Heart Failure / Pace Maker Surgery / Kidney Dialysis(CKD)/ Renal Failure
- ⊙ Major Organ Transplant
- ⊙ Hemophilia
- ⊙ Thalassemia
- ⊙ Neurological Diseases
- ⊙ Flue Blown acquired Immune Deficiency Syndrome
- ⊙ Multiple sclerosis
- ⊙ Tuberculosis / Bronchopneumonia/ Pleurisy
- ⊙ Permanent disablement
- ⊙ Any other disease that may be considered by the Board of Trustees to be critical in nature.

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