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FUTURE OF ACCOUNTING PROFESSION
CHALLENGES & OPPORTUNITIES

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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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Azadi Ka Amrit Mahotsav

- **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."

VISION STATEMENT

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

IDEALS THE INSTITUTE STANDS FOR

- *to develop the Cost and Management Accountancy profession*
- *to develop the body of members and properly equip them for functions*
- *to ensure sound professional ethics*
- *to keep abreast of new developments*

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

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Institute Motto

असतोमा सद्गमय
तमसोमा ज्योतिर् गमय
मृत्योर्मामृतं 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

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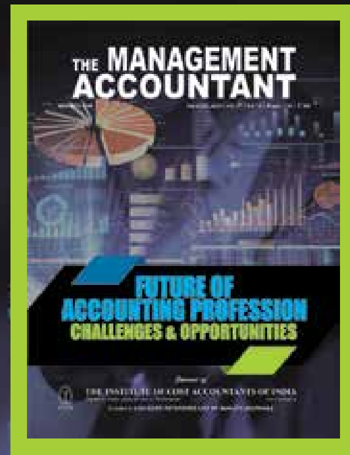

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We have expanded our Readership from **1** to **94** Countries

Afghanistan, Algeria, Argentina, Australia, Azerbaijan, Bahrain, Bangladesh, Belgium, Benin, Botswana, Brazil, British Indian Ocean Territory, Bulgaria, Cambodia, Cameroon, Canada, Chile, China, Colombia, Croatia, Czech Republic, Djibouti, Egypt, France, Gambia, Germany, Ghana, Great Britain, Greece, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iraq, Ireland, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Liberia, Lithuania, Malawi, Malaysia, Mauritius, Mexico, Morocco, Myanmar, Namibia, Nepal, Netherlands, New Zealand, Nigeria, Oman, Pakistan, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Serbia, Seychelles, Singapore, Slovakia, Slovenia, South Africa, Spain, Sri Lanka, Suriname, Sweden, Switzerland, Syria, Taiwan, Tanzania, Thailand, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States of America, Vietnam, Zaire, Zimbabwe.

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OUR NEW PRESIDENT

CMA Vijender Sharma

has been elected as President of the Institute for the period 2022-2023

- CMA Vijender Sharma is a Central Council Member of Institute of Cost Accountants of India for year 2019-23.
- CMA Vijender Sharma is a Fellow Member of the Institute of Cost Accountants of India and Law Graduate. He is a leading practicing Cost Accountant since 1998 & Insolvency Professional since Jan' 2017. His dynamism is embedded with rich experience of over 22 years in diversified areas of Financial, Cost and Management Accounting, Internal Audit, Management Consultancy, Forensic Audit, Insolvency and Liquidation, etc.
- He has been actively associated with the Institute in various capacities since the year 2007. He has been Central Council Member 2015-19 of the Institute of Cost Accountants of India. He has been Chairman of various Committees such as Public Finance & Government Accounting, Election Reform Committee, Professional Development & CPD Committee and International Affairs Committee.
- He has been Regional Council Member of North India Regional Council of the Institute of Cost Accountants of India (NIRC-ICAI) for the term 2007-2011 & 2011-2015. He has been Chairman of (2012-2013 and 2014-2015) and performed in various capacities as RCM.
- CMA Vijender Sharma is active member of the :
  - Insolvency Professional Agency of Institute of Cost Accountants of India (IPA-ICAI).
  - Insolvency Professional of Insolvency and Bankruptcy Board of India.
  - PHD Chamber of Commerce- Committee for Insolvency & Bankruptcy Code, Committee for National Council on MSME & Committee for Indirect Tax.
  - ASSOCHAM- Committee for Forensic Audit, Committee for Direct Tax Committee, & Committee of Law & Justice Committee.
  - Association of Certified Fraud Examiner (ACFE).
- Developed advocacy for the profession with maximum representation to the different authorities of Central & State Govt., Public & Private enterprises through a dedicated, focused and strategic approach, combined with aggressive follow-up.
- CMA Vijender Sharma has been speaker for various programs/seminar for Comptroller and Auditor General of India (CAG), Insolvency & Bankruptcy Code, Goods and Services Tax (GST), Forensic Department, Excise Department, Service Tax Department.
- He has organized many programs for professionals in GST and IBC and also for Income Tax, Central Excise, VAT, Cost Audit, Forensic Dept., Banks etc.
- Also conducted various competency and capacity building programs to enhance skills and explore the talent for CMA Members.

OUR NEW VICE PRESIDENT

CMA Rakesh Bhalla

has been elected as Vice President of the Institute for the period 2022-2023

- He is a Fellow Member of The Institute of Cost Accountants of India and a Commerce Graduate.
- He has rich experience of the corporate world and currently he is the Chief Financial Officer of SML ISUZU Ltd (formerly Swaraj Mazda Ltd.). In addition to this he is also heading the Purchase department, special advisor to Marketing and holding a position as Chief Risk Officer of the Company.
- He is elected member of Council of the Institute for the term 2019-23.
- He has served as the Chairman of Direct Taxation Committee (2021-22) and Chairman of NIRC (2010-11 & 2013-14) and is actively involved in Institute democratic process since 2001 at Chandigarh Chapter, NIRC and at Central Council since 2019.
- Being member of various committees of Industry Associations, he is also associated with SIAM and ASSOCHAM as a member of various committees of these organisations. He is actively involved in regular interaction with Government Officials including Central & State level Ministers, other Industry professional colleagues specifically on Taxation & Financial matters.

EDITORIAL

Future of Accounting Profession: Challenges & Opportunities

Change is an undeniable fact of life. With every passing year, new and innovative improvements are made in software, which helps in enhancing the user experience. Accounting trends and developments are reactions to changing landscapes, technology disruption and other market forces that shape the accounting profession as we know it today. The change is rapid and driven largely by lightning-fast advances in technology. In many ways, the pandemic has hastened that adoption. Like, wider adoption of cloud-based accounting software, as well as a move towards automation and artificial intelligence.

The past decade has seen a slow but steady migration to cloud computing. But as with so many other things, the COVID pandemic has accelerated that adoption of cloud computing by at least a decade. Cloud computing allows easy access from anywhere, at any time, on any device, in real-time. In 2022, companies are going to continue to migrate their accounting software, platforms and other applications to the cloud, for a number of reasons. There is an incredible increase in mobility with cloud computing, allowing for access from any device. Cloud computing deploys top-notch security, process automation, an increased ease of recovery and improved collaboration and scalability to take into consideration.

Automation can take away the mundane and transactional work, which will require accountants to upscale and focus on analytical and soft skills, allowing them to put their efforts into problem-solving, leadership, and people skills while they leave the rest of their time-consuming tasks such as data entry to be taken care of by artificial intelligence. Machine learning and RPA are being used to reframe the approach to accounting. Artificial Intelligence (AI) has made a significant impact in the world of finance and accounting. In fact, AI-enabled accounting information systems are the way for enterprises to stay strong contenders in an increasingly competitive market because they save time and provide deep insights. An Accounting Information System (AIS) is the systematic process of collecting, storing, and processing financial & accounting data which is used by internal accountants to report the information to investors, creditors & tax authorities. This system disseminates the company-related information to the stakeholders for faster decision-making.

Financial reporting is a critical part of accounting information systems, helping to ensure the ethical allocation and discussion of capital in the investment community and the public. Financial regulations globally make the effective deployment of an accounting information system a near necessity for any small, medium, or large-sized business. Financial reporting is no more a painstaking, manual process. That is because in recent years, software solutions have streamlined reporting procedures with the use of features and functionalities that allow hassle-free collaboration over a cloud environment. Moreover, financial reporting has gone digital in several geographies through the use of a structured data format known as XBRL or eXtensible Business Reporting Language. The XBRL format has revolutionized corporate reporting by helping companies create documents that computers can ‘understand’. XBRL lowers information processing costs by making it easier for analysts, investors, and other stakeholders to access complex financial information.

IFRS has also become a universal financial reporting language through which all the global companies are communicating with their global investors rather than having a divergent set of standards applied differently in different countries. In the context of corporate governance, the role of IFRS is very significant. Whilst IFRS constitute high-quality accounting standards, XBRL represents a technology standard that can enhance the usability of IFRS and overall financial reporting transparency. This is the key to strengthening the corporate governance mechanism for various reasons. The conceptual framework of IFRS and measurement principles is very much similar to the cost accounting principles and standards which are based on materiality, relevant cost, current value and uniformity. Further in strengthening the corporate governance mechanism along with IFRS there is a need to introduce the concept of management audit within the supervision of independent directors and the regulators.

CMAs should endeavour value addition to their clients by advising cost effective sustainability practices and reporting. They should contribute to the organization’s financial management procedures in order to ensure that they are effective, efficient and compliant with appropriate financial statutory and regulatory requirements. With more diverse skill sets and greater technical acumen, CMAs can bring their own expertise to teams in other business units, providing crucial financial intelligence, refining budgets or ensuring compliance. As a function, accounting may become less about refining one’s skill set through certifications and more about core competencies that grow over time, with a focus on lifelong education and skill development required to take on a complex, ever-changing business environment. Tomorrow’s accounting professionals will play a more creative and strategic role in their companies. As a result, their businesses will not only enjoy a more efficient workflow but also reap useful insights from their accounting processes, facilitating their own resiliency, agility and competitive footing.

This issue presents a good number of articles on the cover story ***“Future of Accounting Profession: Challenges and Opportunities”*** 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.* 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

Month	Theme	Subtopics
January 2023	Emerging Trends in Banking: Transforming Customer Experience	⦿ Privatization of Public Sector Banks (PSBs): A Boon or Bane ⦿ Evolution of Smart Data, RPA & AI in Indian Banking Sector ⦿ Metaverse: the next frontier for the Digital Banking ⦿ Neo-banking: Shaping the future of India's direct-to-consumer (D2C) ecosystem ⦿ Linkage of Core Banking System and India Post: A welcoming approach ⦿ Credit outreach drive by PSBs as a part of Azadi Ka Amrit Mahotsav ⦿ Enhanced Access and Service Excellence (EASE) 5.0, a 'Common reforms agenda' for PSBs ⦿ 3-yr roadmap strategy to support SMEs and farming under EASE reforms ⦿ Retail Banking in India: Re-inventing and repositioning to attain Financial Wellness ⦿ Setting New Standards to achieve Governance, Transparency and Excellence-Role of CMAs
February 2023	Infrastructure Investment in Emerging Markets: Trends and Challenges	⦿ Indian Infrastructure: Leveraging past experiences for Future Growth ⦿ Debt Sustainability of Infra Investment ⦿ Infrastructure Resilience Post Pandemic ⦿ Investing in Energy Infrastructure for the Climate Transition ⦿ Strengthening Infrastructure Governance ⦿ Integration of ESG - SDG factors for infrastructure Investment Decisions ⦿ Financing Quality Infrastructure Investment in the Asian Economies ⦿ Achieving Sustainability and Cost Competitiveness through apt Infra Investment ⦿ Framing Guidance for Implementing Quality Infrastructure Investment: Role of CMAs
March 2023	Corporate Governance: A pathway to Economic Sustainability	⦿ Robust governance: a key factor in driving long-term, sustainable growth ⦿ Board Room Challenges in the Post-Pandemic era ⦿ Board's Role in strengthening Governance to accelerate Environmental, Social and Governance (ESG) ⦿ Integrating CSR into the Corporate Governance Framework ⦿ The Two Sides of the Governance Coin: Competition and Regulation ⦿ Regulation in Corporate Governance; in India and Elsewhere ⦿ Drivers – the impact of the credit crunch ⦿ Essential ingredients of good governance ⦿ Startup Governance: Crucial Building Block for Sustainable Success ⦿ Corporate Governance in the forthcoming years: what more to add on
April 2023	Evolving Health Care System: Challenges, Opportunities and Way Ahead	⦿ Prominent changes in the healthcare sector particularly with consumer behaviour ⦿ Financial constraints hospitals facing: Ways to overcome those glitches ⦿ Lack of investment in organizational development–how to draw private investor's attention? ⦿ Health Care Pricing ⦿ Increasing patient satisfaction and gaining competitive edge ⦿ Value-based healthcare: aligning prices for services towards patients ⦿ Cost reduction programs and strategies: Resource mapping process ⦿ Essentiality of Healthcare Cost Management ⦿ Possible opportunities for Sustainable Health Care System in the new normal post Pandemic ⦿ Telemedicine and digital healthcare ⦿ Health financing & Health infrastructure ⦿ Medical Waste Management

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 latest by the 1st week of the previous month.

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President's Communiqué

CMA Vijender Sharma
President
The Institute of Cost Accountants of India

"Try not to become a person of success, but rather try to become a person of value."

- Albert Einstein

My Dear Professional Colleagues,

It gives me immense pleasure to pen down my first communique as the 65th President of the Institute for the year 2022-23. At the outset, I am grateful to my Colleagues in the Council for reposing their confidence and trust in me to lead the Institute as its President and it is indeed a great honour and responsibility to serve my mother Institution.

I strongly believe that in everyone's life there are people who make key contribution in our development and growing-up process by helping us to make right decisions in various phases of life. One such person in my life was Late CMA Rakesh Singh, Former President of the Institute. I will forever be indebted to him as my 'Guru' who selflessly guided me throughout my professional journey.

I congratulate my Council Colleague CMA Rakesh Bhalla on his election as Vice-President of the Institute. I am sure that with his support, we both will greatly benefit the Institute attaining greater heights of professional excellence and recognition.

I would like to thank CMA P. Raju Iyer, Immediate Past President for commendable contributions made during his tenure. I am looking forward to working closely with my Council Colleagues and office bearers of the Institute to sustain and promote all the new initiatives that have been started by my predecessors.

I believe that the fruitful results can be achieved only with the organised efforts and co-operation of all stakeholders of the Institute. With the unstinting encouragement and cooperation from my colleagues in the Council of the Institute, I have no doubt that we will be able to promote & develop the CMA profession and contribute to the growth of the industrial and economic climate of the country.

Cost Accountants to certify KPIs disclosed in Offer Documents

I am happy to inform that Securities and Exchange Board of India (SEBI) in its latest amendments in the ICDR Regulations, has allowed Cost Accountants, holding a valid certificate issued by the Peer Review Board of the Institute of Cost Accountants of India to certify all Key Performance Indicators (KPIs) disclosed in the Offer Documents. The Institute has already initiated the necessary action for the capacity building of the members to enable them to undertake KPI certification assignments.

Constitution of Social Stock Exchange Advisory Committee

The Securities and Exchange Board of India (SEBI) has constituted a Social Stock Exchange Advisory Committee (SSEAC) under the Chairmanship of Dr. R. Balasubramaniam, Member- HR, Capacity Building Commission for the development of regulatory framework for Social Stock Exchange and I am happy to inform that SEBI has included the President of the Institute as a member to the SSEAC. The first meeting of the SSEAC is scheduled to be held on 9^{th} December, 2022.

Meeting with MCA Officials

After taking over as the President, on 29^{th} November, 2022, I along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extended greetings to Shri Manoj Govil, IAS, Secretary to the Government of India, Ministry of Corporate Affairs (MCA), Smt. Anuradha Thakur, IAS, Additional Secretary to the Government of India, MCA and Shri Manoj Pandey, Joint Secretary to the Government of India, MCA and apprised them about the ongoing activities of the Institute and matters related to profession.

Pre-Budget Memorandum Meeting for Union Budget 2023-24

CMA P Raju Iyer, Immediate Past President, CMA Chittranjan Chattopadhyay, Council Member and CMA Mritunjay Acharyya, General Manager (Finance), Numaligarh Refinery Ltd made a presentation before the CBDT on 29^{th} November, 2022 on the Pre-Budget Memorandum submitted by the Institute for the Union Budget 2023-24.

I am happy to inform that our submissions were well received by the Ministry of Finance. The discussion also included the matter raised by the Institute, on inclusion of Cost Accountants in the definition of "Accountant" under the Income Tax Act, 1961. The Institute also presented copies of our recently released Tax Research Bulletin (Annual Issue) to Ms. Pragya Sahay Saksena, IRS, Member, CBDT, Ministry of Finance, Govt. of India.

At the end, I want to assure you all that I will leave no stone unturned to ensure inclusive growth of CMA profession by addressing the challenges and taking vigorous efforts towards exploring and making available ample opportunities for the members in different sectors of the economy.

I extend my greetings for Merry Christmas and upcoming New Year 2023 ahead. I wish you success in all your endeavours.

With warm regards,

CMA Vijender Sharma

December 02, 2022

COMMUNIQUÉ FROM THE PRESIDENT (2021-22)

CMA P. Raju Iyer

President (2021-22)

The Institute of Cost Accountants of India

"If you want to walk fast, walk alone. But if you want to walk far, walk together."

- Ratan Tata

My Dear Professional Colleagues,

It is an emotional moment for me as I write my last communique as President of this premier Institution. When I look back I feel satisfied with the accomplishments of the Institute during my tenure as 64th President of the Institute. During my tenure, I had the opportunity to interact with many Union Ministers, State Ministers and many senior officials of the Government. I am grateful to all of them. I convey my special thanks and gratitude to Hon'ble Union Minister for Finance and Corporate Affairs, Smt. Nirmala Sitharaman for all the cooperation and support extended to the Institute as always.

I take this opportunity to express my sincere gratitude to all my colleagues in the Council and Government nominees for their kind support and guidance provided in carrying out my duties in the best interest of the Institute and the Profession. I also thank the members of the Regional Councils and Chapters of the Institute and employees of the Institute for their wholehearted support to the activities of the Institute.

I would also like to thank all former Presidents of the Institute who always extended their support with their suggestions and guidance on any matter of concerns throughout the year. I would like to mention some of the key recent accomplishments of the Institute as follows:

- The Institute has achieved an unprecedented growth in students' strength & campus placements and reached a landmark figure of Students intake of around 76,000 during 2021-2022 and more than 2,000 Campus Placements during last 3 terms.
- Launch of CMA Syllabus – 2022.
- Launch of Digi-Locker facility for all the members and students.
- Inauguration of Sonepat Chapter, Sathavahana Chapter and Warangal Chapter.
- The Management Accountant Journal enlisted in the prestigious "UGC-CARE Reference List of Quality Journals".
- Successful conduct of 60th National Cost Convention (NCC 2022), National CMA Practitioners Convention 2022, National Students' Convocation – 2022, Awards Presentation Ceremony of 17th National Awards for Excellence in Cost Management, 5th and 6th CMA Awards.
- Celebrated Azadi ka Amrit Mahotsav (AKAM) by conducting various events across the country.
- Celebrated the 5th Anniversary of GST Day.
- Successful conduct of SAFA Foundation Day Conference.
- Launch of Advanced Certificate Course in Internal Audit.
- Launch of Certificate Course in Health Care Finance with Sri Ramachandra Institute of Higher Education and Research.
- Launch of CMA One Co-branded RuPay Credit Card exclusively designed for CMA members.
- Finalization of IT Policy & Procedure manual.
- Designing and Development of Grievance Portal.
- Bagged a project for capacity building training programs under National SC-ST Hub (an initiative of the Ministry of MSME, Government of India).
- Initiated discussions with CPA Australia, IMA-USA and CIPFA-UK for signing an MOU to offer paper exemptions & membership routes to members of both the Institute.
- Entered into MoUs with many esteemed institutions and organisations, such as Jio Platforms Limited, Scottish Church College, Indian Accounting Association, Manonmaniam Sundaranar University [State University], Srimad Andavan Arts and Science College, Ravenshaw University, Shalby Hospitals, Maharaja Sayajirao University, Birla University, Alagapp University, Indira Gandhi National Open University (IGNOU), Uttar Pradesh Skill Development Mission (UPSDM), World Trade Center Shamshabad,

World Trade Center Visakhapatnam, IIA–India, GLS University, Thiruthangal Nadar College, Indian Statistical Institute, Madurai Kamaraj University, Dwaraka Doss Goverdhan Doss Vaishnav College (Autonomous), Kalinga Institute of Social Sciences (KISS), Additional Skill Acquisition Programme (ASAP), an undertaking of Kerala Government and Uttar Pradesh Skill Development Mission.

- Release of Aide Memoire on Infrastructure Financing, Guidance Note on Risk Based Internal Audit of Commercial Banks, Guidance Note on Internal Audit of Life Insurance Companies, Technical Guide on Performance Audit, Digital Transformation – A Prismatic View, GST – A Professional Overview, 4th Edition of the Member's Handbook, Concept Note on Augmenting the Farmers' Income: Road Map for CMAs, CMA Agri Bulletin and MSME & Start-up Bulletin.

I will be handing over the baton to my successor on 28th November and I am sure he will take the CMA profession & the Institute to further glory and greater heights. I sincerely believe that the initiatives taken during my tenure will be carried forward by my successor and many other new opportunities will be created for the members under his leadership.

London Global Convention 2022

The Institute of Directors (IOD) organised its 'London Global Convention 2022 on the theme "Building an Effective Board that Works & Top Global Trends" during 09 - 12 November, 2022 in London (UK). The Institute was the official 'Associate Partner' of this Convention. I along with CMA Vijender Sharma, Vice President of the Institute represented the Institute in the Convention. I addressed the participants during one of the Plenary Session on the topic "Latest with Corporate Governance and Sustainability in New Era" held on 11th November, 2022.

Members' Meet in London

I along with CMA Vijender Sharma, Vice President of the Institute also had the opportunity to meet CMA Anirban Mukhopadhyay, Chairman, London Overseas Centre of Cost Accountants (LOCCA), CMA Udayan Guha, Secretary, LOCCA and other members of the Institute in London and deliberated on the various issues & matters of their concern related to the profession during the Members' Meet organised by LOCCA on 11th November 2022.

IFAC Council Meeting

I along with CMA (Dr.) Balwinder Singh, Former President & Council Member of the Institute attended the Ordinary Council Meeting of International Federation of Accountants (IFAC) held on 15th November, 2022 at Jio World Centre BKC, Mumbai.

CAPA Member Meeting and EGM

I along with CMA Vijender Sharma, Vice President and CMA (Dr.) Ashish P. Thatte, Council Member of the Institute attended the CAPA Member Meeting and EGM on 17th November, 2022 in Mumbai.

75th SAFA Board Meeting

I along with CMA Vijender Sharma, Vice President of the Institute attended the 75th SAFA Board Meeting on 17th November, 2022 in Mumbai.

Meetings with International Accountancy Bodies

- CPA Australia: I along with CMA Vijender Sharma, Vice President and CMA Chittaranjan Chattopadhyay, Council Member of the Institute attended a meeting with Dr. Gary Pflugrath, Executive General Manager Policy and Advocacy, Ms. Deborah W.K Leung, Executive General Manager, International, CPA Australia, Mr. Leslie Leow, General Manager, Emerging Markets-International, CPA Australia and other officials of CPA Australia on 18th November, 2022 at Jio World Centre BKC, Mumbai. Both the Institute has agreed to complete the Syllabus mapping procedure to offer mutual advanced entry to members through paper exemptions to acquire the qualification of the other Professional Body.
- IMA USA: I along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Council Member and CMA Neeraj D. Joshi, Council Member of the Institute attended a meeting with Mr. Jeff C Thomason, President & CEO IMA, Mr. James Gurowka, Senior Vice President IMA and other representatives of IMA USA on 18th November, 2022 at Sofitel BKC, Mumbai to explore the possibility of entering into an MOU for the mutual benefit of the members of both the Institutes.
- CIPFA UK: I along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Council Member and CA Mukesh Singh Kushwah, Government Nominee to the Council of the Institute attended a meeting with Mr. Mike Driver, Past President, Mr. Dan Worsley, CEO and Mr. Drew Cullen (Director of Policy and Membership), CIPFA on 20th November, 2022 at Jio World Centre, Mumbai to explore the possibility of entering into an MOU for the mutual benefit of the members of both the Institutes.
- ACCA, UK: I along with CMA Vijender Sharma, Vice President of the Institute attended a courtesy meeting with Ms. Helen Brand, Chief Executive of ACCA, UK, Mr. Md. Sajid Khan, Director-India, ACCA and Mr. Gaurav Kapur, Head of Policy, ACCA India on 20th November, 2022 at Sofitel BKC, Mumbai.

Members' Meet at Vijayawada Chapter

I am pleased to inform that Vijayawada Chapter of the Institute hosted the members' & students' meet and interaction with the President on 23rd November, 2022 at VIjayawada. I highlighted recent initiatives of the institute and interacted with the members and students on the prospects and professional opportunities. CMA Papa Rao Sunkara, Council Member and CMA K. Pandu Ranga Rao, RCM, SIRC made laudable arrangements for the event. Vijayawada Chapter office bearers CMA P SR Swamy, CMA Gurunadh Rao, CMA Vinay Ranjan coordinated the event meticulously. CMA Rakesh Shankar Ravisankar - Member IAASB was a special invitee to the function.

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 plan and execute numerous activities during the month of November 2022 under the Chairmanship and leadership of CMA Chittaranjan Chattopadhyay. The summary of such activities and initiatives are as follows:

a) Meeting with Dignitaries

- I along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Chairman, BFSIB and CMA (Dr.) Ashish D Thatte, Chairman, Corporate Laws Committee met Ms. Madhabi Puri Buch, Chairperson, SEBI at her Office in Mumbai on 1st November, 2022 and represented about the Institute and inclusion of CMAs in various certifications in the capital markets.
- CMA Chittaranjan Chattopadhyay, Chairman, BFSIB met Shri Sanjib Sarkar, General Manager, Credit Monitoring Department, Bank of India on 2nd November, 2022.
- CMA Chittaranjan Chattopadhyay, Chairman, BFSIB along with CMA Vijender Sharma, Vice President met Shri Rajkiran Rai G, MD, National Bank For Financing Infrastructure and Development (NaBFID) at his office in Mumbai on 16th November, 2022. The Chairman, BFSIB and Vice President also met Shri Arun Bansal, Executive Director of IDBI Bank on the same day.
- CMA Chittaranjan Chattopadhyay, Chairman, BFSIB along with CMA Vijender Sharma, Vice President met Smt. Swapna Bandopadhaya, General Manager, Bank of Baroda on 17th November, 2022 to discuss inclusion of CMAs in various recruitment advertisements for the post of specialist officers and others in the bank.

b) Conduct of the Workshop on Due Diligence on Corporate Borrowers of Banks by CMAs

BFSI Board organized a workshop on how to conduct the due diligence on Corporate Borrowers of Banks work for 3 days from 18th to 20th November, 2022 which was attended by members in practice and in industry along with representation from Corporates. The event was inaugurated by Shri Subrata Mukherjee, Additional CVO, State Bank of India on 18th November, 2022. In the valedictory session, Shri Nagesh Babu, Former DGM, Canara Bank who had wide experience in conducting Due Diligence Audit, graced the occasion to share his experience and interact with the participants.

c) Certificate Courses on Banking

In view of the overwhelming expression of interest the BFSI Board had re-opened the admission window for the three Certificate Courses on Banking, viz –

- Certificate Course on Concurrent Audit of Banks (8th Batch)
- Certificate Course on Credit Management of Banks (8th Batch)
- Certificate Course on Treasury and International Banking (6th Batch)

I have been informed that the syllabus of all these courses is under review and new study materials are under preparation. The members and students are requested to take the opportunity for capacity building and knowledge enhancement by enrolling in such courses for which the link of admission is https://eicmai.in/advscc/Home.aspx

d) Certificate Course on Investment Management in association with NISM

BFSI Board in association with NISM has successfully conducted the 4th batch of the Certificate Course on Investment Management (Level-II) and the certificates have been provided to the successful candidates.

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 are included for the lateral recruitment of Forex Dealer (MMG-III) and Treasury Dealer (MMG-III) in Punjab and Sind Bank.
- CMAs are eligible to apply for the post of Professional Director of The Andhra Pradesh State Co-operative Bank Ltd., Vijayawada.
- CMAs are eligible to apply for the post of Manager (Credit Analyst), State Bank of India.

Representation letters have been sent to various Banks, Insurance Companies and Financial Institutions for inclusion of CMAs in various posts and with proper follow up and I am hopeful to have our names included in coming days for all Banks.

f) Draft Master Directions – Information Technology Governance, Risk, Controls and Assurance Practices Guidelines issued by the Reserve Bank of India

The BFSI Board had provided the representation on the Draft Master Directions – Information Technology Governance, Risk, Controls and Assurance Practices Guidelines based on the feedback received from Bankers and I hope that CMAs would be included in the final Notification to be issued by the RBI for which BFSIB is making follow-ups.

g) Sale of Aide Memoire on Infrastructure Financing

As mentioned in my earlier communique, the handbook which was released by BFSIB titled 'Aide Memoire on Infrastructure Financing' continued to receive encouraging response from stakeholders and now the handbook has been reprinted with ISBN No which will ensure wider reach to reach across the unreached. The members, students and others can grab their copies through online purchase via the link https://eicmai.in/booksale_bfsi/Home.aspx .

h) 2nd ICAI National Awards -Essay Contest 2022 for Bankers

The BFSI Board is organizing the ICAI National Awards -Essay Contest 2022 for Bankers on the topic of "Pivotal Role of Banks's Lending/Credit to achieve Atmanirbhar Bharat". The last date of applications is 15th December, 2022 and the details of the modalities of the event can be viewed as per the following link: https://icmai.in/icmai/Webint-BI.php I call upon all bankers to participate and send their essays for the 2nd ICAI National Awards- Essay Contest 2022 for Bankers within the time frame mentioned above.

i) Release of Handbook on Stock and Book Debts Audit (Revised and enlarged 2nd Edition)

I am happy to announce that the BFSI Board has released the revised and enlarged 2nd edition of the Handbook on Stock and Book Debts Audit. The publication is available in soft copies in the BFSI portal and in order to acquaint stakeholders with the mechanism of stock audit process we would be conducting a workshop to explain the procedure of audit for which an announcement is expected to be made soon. We would be soon be releasing the hard copy of the publication the details and purchase procedure of which will be available on the BFSI portal soon.

BOARD OF ADVANCED STUDIES & RESEARCH

I am pleased to share that the Board of Advanced Studies & Research has started two very important Courses for the benefit of the members and students:

- Diploma in Financial Modelling & Valuation (1st Batch)
- Certificate Course in Data Analytics for Finance Professionals (6th Batch)

A good number of participants have been registered for these courses. I must congratulate CMA Debasish Mitra, Chairman - Board of Advanced Studies & Research and his staff members for conducting such valuable and futuristic courses to meet the need of the industries.

CONTINUING EDUCATION PROGRAMME COMMITTEE

The Continuing Education Programme Committee of the Institute organized a Seminar on "Reforms of Sustainable Growth and Value Creation in India Role of CMAs" at the Jamuna Banquet on the 25th November, 2022. CMA Subhash Chandra Garg, former Finance Secretary, Govt. of India, was the Guest of Honour and the esteemed speaker for the evening. I had the pleasure of attending and addressing the participants during the event. The seminar was graced by the presence of CMA Biswarup Basu, Immediate Past President and Chairman of CEP Committee, CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board, Former Presidents of the Institute CMA Amal Kumar Das and CMA Harijiban Banerjee. The program was also attended by the Regional Council Members CMA Arundhati Basu, CMA Pallab Bhattacharya and CMA Abhishek Kumar Singh.

While discussing about the role of CMAs, CMA Subhash Chandra Garg emphasised on value addition in accounting rather than simple Cost and Financial Accounting. The speaker enumerated various lucid and elaborate practical examples to elegantly place his discussion. There was active participation from the members who clarified their doubts in the Question and Answer session.

During the month, around Fifty 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 Area of Practice : US Accounting & Taxation, Related Party Transactions - Compliance and Disclosure, Compliance under Companies Act, 2013, Corporate Governance and Risk Management, TCM Framework in Concept and Application, Due Diligence of Corporate Borrowers of Banks by CMAs, Agro Finance - Need of the Hour, Workshop on EXIM (International Trade), Annual London Global Convention on Corporate Governance & Sustainability and so on. I am sure our members are immensely benefited from the deliberations in the sessions.

DIRECTORATE OF CAT

- **CAT Proposal to Maharashtra State Skills University**

Team CAT led by my council colleague CMA H. Padmanabhan, Chairman (CAT) met with Dr. Apoorva Palkar, Vice-Chancellor of Maharashtra State Skills University (MSSU) on 15th November, 2022 in Mumbai and submitted proposal to implement CAT course. I am glad to share with that Dr. Apporva was very impressed with the proposal and therefore, a fruitful association with MSSU appears to be very likely.

- **CAT Course Part - I Examination – January 2023 term**

CAT Directorate issued Notification for the CAT Course Part - I Examination – January 2023 term. The examination will be held on 22nd January, 2023. I wish success to all the students who are going to appear in the examination.

- **Online Classes for CAT Students**

CAT Directorate started the e-learning classes for the students pursuing CAT Course Part II from 3rd November, 2022. I hope students are regularly attending the classes.

DIRECTORATE OF STUDIES

The Directorate of Studies of the Institute 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 the prestigious and historical venue of Mahajati Sadan Auditorium, Kolkata to enrich institute's programme and motivate the students. The event was attended by around six hundred (600) students and faculty members from various colleges under the aegis of University of Calcutta. Prof. Asis Kumar Chattopadhyay, Hon'ble Vice Chancellor of University of Calcutta was the Chief Guest of the mega event and esteemed personalities from industry and profession addressed and motivated the young generation with their visionary talk and deliberated on the future direction of their career path. The Institute was represented by me, CMA Biswarup Basu, Immediate Past President, CMA (Dr.) Balwinder Singh, Past President, CMA Chittaranjan Chattopadhyay, Council Member, Former Presidents, members and officials of the institute.

INTERNAL AUDITING AND ASSURANCE STANDARDS BOARD

The Internal Auditing and Assurance Standards Board (IAASB) in its endeavor to provide the right guidance to the members of the Institute to discharge their duties as Internal Auditors and to further improve their professional approach to providing an effective internal audit service has already released number of publications such as the Internal Audit and Assurance Standards, Guidance Notes on Internal Audit of various Industries and Risk Based Internal Audit.

I am happy to inform that IAASB has finalized and released "Guidance Note on Internal Audit of Life Insurance Companies" on the website of the Institute. Members can visit the following link on Institute's website to download various publications of IAASB: https://icmai.in/icmai/news/IAASB-GN.php

MEMBERSHIP DEPARTMENT

I am happy to share that during the month of November 2022, we have granted 191 new Associate memberships and 42 Associate members have been upgraded to Fellowship. I congratulate and extend a warm welcome to all the members.

MEMBERS IN INDUSTRY & PLACEMENT COMMITTEE

The Members in Industry & Placement Committee of the Institute organized the first phase of CMA Campus Placement drive in November 2022 across four Regions of India – Delhi, Kolkata, Mumbai and Chennai for qualified CMAs of June 2022 term after successful conduct of Pre-Placement Orientation Program at 11 major cities. More than 330 qualified CMAs were placed in this campus placement drive. The highest CTC of Rs.28 lakh pa was offered by Power Finance Corporation Ltd. at Delhi Campus, while the average CTC across the drives was Rs.10 – 12 lakh pa. The following companies participated in these placement drives –

- Power Finance Corporation Limited
- Prism Johnson Limited
- Reliance Limited – JIO
- Vedanta Limited
- BNY Mellon
- ITC (Agri Business Division)
- Kalpataru Power Transmission Ltd.
- ITC (Foods Division)
- RSM Astute Consulting Pvt. Ltd.
- Express Roadways Pvt Ltd
- GST Subidha
- BEML Limited
- ITC (Tobacco Division)
- Hindustan Coca Cola Beverages Pvt. Ltd.
- ITC (TM & D Division)
- Ircon International Limited
- Ernst & Young LLP
- GAIL India Limited
- ITC Hotels
- India Tourism Development Corporation
- TIAA Global Business Services (India) Private Limited
- UBS
- Yes Bank
- Medline Industries India Pvt. Ltd
- Cytel
- Ford Motors
- NLC Limited
- ITI Limited
- ABB Limited
- TVS Motor
- ITC Limited (Packaging & Printing Business)

CMA students have continued to find opportunities with many of the best organizations of India. In 2022, there has been a huge surge in the average and maximum salary package over last year. Inspired by the great success in Campus Placement initiatives successively in the last few terms, we are planning for Overseas Campus Placement drives very soon to place young CMAs abroad. The awareness level is also on the rise as more students are considering Cost Management Accounting as a profession and a preferred career destination. The Institute is also working in the same direction to enhance the skills of the students to develop them as future ready professionals to a great extent.

PROFESSIONAL DEVELOPMENT COMMITTEE

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 November 2022, where services of the Cost Accountants are required in Bureau of Indian Standards, Punjab National Bank Bhubaneswar, Bharat Sanchar Nigam Limited Portal, IIFCL Asset Management Company Limited, Andaman and Nicobar Islands Integrated Development Corporation Ltd. (ANIIDCO), District Health & Family Welfare Society (DH&FWS), Rohtak, Bihar State Mining Corporation Limited, Chhattisgarh State Cooperative Marketing Federation Limited, Ferro Scrap Nigam Limited, Engineering Projects (India) Ltd., Indian Ordnance Factories, etc.,

Professional Development Committee in association with PHD Chamber of Commerce and Industry had organised webinar on "How to File/Revise Tran 1 & Tran 2 on 30th November 2022".

REGIONAL COUNCIL & CHAPTERS COORDINATION COMMITTEE

The Regional Council & Chapters Coordination Committee under the Chairmanship of CMA (Dr.) K Ch A V S N Murthy organized a WEBINT on "RERA Law in a NUTSHELL - including professional opportunities for CMAs" on Wednesday, 2nd November, 2022.

CMA Vijender Sharma, Vice President addressed the participants along with CMA (Dr.) K Ch A V S N Murthy Chairman of Regional Council & Chapters Coordination Committee and organizer of the WEBINT. The Guest speaker for the event was CMA Melam Ram Pavan Kumar, eminent finance professional, who shared his vast experience and knowledge of the RERA Law while highlighting the importance and role of CMAs. The WEBINT was attended in large numbers with active participation in the Q&A round.

TAX RESEARCH DEPARTMENT

The Tax Research Department of the Institute has submitted the Pre-Budget Memorandum to the TRU, Finance Ministry, Government of India on 4th November, 2022.

A webinar was hosted by the Department on 9th November on the topic "Rising cases of Disputes in GST - Possibilities and Ways forward". A workshop was also held on the topic, 'EXIM (International Trade)' from 17th to 21st November. Both the workshop and the webinar were widely participated and appreciated by members, learners and participants.

The Tax Research Department in association with Bhawanipur Education Society College, Kolkata conducted a grand seminar at the premises of the College on the theme "Taxation & Economy of India – Way Forward" on the 12th November. The session was addressed by eminent dignitaries like, Dr. Suman Kumar Mukerjee, Director General, The Bhawanipur Education Society College, CMA Chittaranjan Chattopadhyay, Chairman – Indirect Taxation Committee, Prof. Dilip Shah, Dean of Students Affairs, The Bhawanipur Education Society College, CMA Timir Baran Chatterjee, Tax Consultant, Dr. Shiladitya Chatterjee, IAS (Retd.), Advisor, Government of Assam, PMO, ADB, CMA Mrityunjay Acharjee, General Manager (Finance), Numaligarh Refinery Ltd. and Dr. Tridib Sengupta, Coordinator, Department of Business, Administration, The Bhawanipur Education Society College. A large number of students and college faculties of Seven other Colleges attended the Seminar. The program was attended by a huge number of participants. I would like to place on record my profuse thanks and gratitude to the College Authority for their association with us and look forward for further value addition to the College Students in the field of Taxation.

The official Inauguration of GST Course of the Institute for the students of Malappuram District Panchyath was held on 12th November, 2022. A MoU sharing ceremony was organized on 6th September, 2022 at Malappuram, wherein Hon'ble Deputy Opposition Leader of Kerala, Shri P K Kunjalikkutty, MLA and CMA H Padmanabhan, Council Member attended the occasion along with other eminent dignitaries. The Institute has signed MoU with the Malappuram District Panchayat earlier on 12th August, 2022. GST Course for Colleges and Universities was also completed at The New College (Autonomous) Chennai.

The classes for the Taxation courses are being conducted regularly for all the seven courses and the Tax Bulletin is also being launched fortnightly. The Tax Research Department has started a Quiz Contest for members. Every Friday QUIZ contest is being conducted from 5 p.m. onwards.

ICMAI REGISTERED VALUERS ORGANISATION (RVO)

I am pleased to inform that ICMAI RVO has successfully organized "50 Hrs training programs" of 27th Online Batch Securities or Financial Assets , 19th Online Batch Land and Building, 20th Online Mandatory COP Program, and "Professional Development Programs" of Workshop on Changes in International Valuation Standards, Certificate Course- Valuation of Intangible Assets, Skill Development Program on Valuation, International Lecture Series -Power Talk Automated Valuation Models, the Power Workshop on Valuation, Certificate Course- Valuation of Intangible Assets, Master Class on Developing expertise in application of valuation Approaches and Master Class on Understanding and developing skills to cope up with Changing landscape of Valuation during the month.

I wish prosperity and happiness to members, students and their families and pray for the success in all of their endeavours.

May God Bless you and keep you safe always!

With warm regards,

CMA P. Raju Iyer
November 27, 2022

REFORMS OF SUSTAINABLE GROWTH AND VALUE CREATION IN INDIA - ROLE OF CMAs

The CEP Committee of the Institute organized a seminar on "Reforms of Sustainable Growth and Value Creation in India Role of CMAs" at the Jamuna Banquet on the 25th November, 2022. CMA Subhash Chandra Garg, former Finance Secretary, Govt. of India, was the Guest of Honour and the esteemed speaker for the evening. The seminar was graced by the presence of the President of the Institute CMA P. Raju Iyer, Immediate Past President and Central Council Member CMA Biswarup Basu, CMA Chittaranjan Chattopadhyay, Central Council Member and Chairman, BFSI Board, past presidents of the institute CMA Amal Kumar Das and CMA Harijiban Banerjee. The program was also attended by the Regional Council Members CMA Arundhati Basu, CMA Pallab Bhattacharya and CMA Abhishek Kumar Singh.

After the lighting of the auspicious lamp and felicitation of the guests, CMA Biswarup Basu, Chairman, CEP Committee welcomed the dignitaries and the audience. CMA Chittaranjan Chattopadhyay, Chairman, BFSI Board thanked the guest of honour, CMA Subhash Chandra Garg for his gracious presence and he expressed his delight about CMA Garg's book 'The 10 trillion-dollar dream, the state of the Indian economy and the policy reforms agenda' published by the Penguin Random House India and for his acceptance to be a part of the BFSI board of the Institute.

CMA P. Raju Iyer, President of the Institute expressed his thrill for such a wonderful seminar. He also highlighted the potential of CMA profession and how the ministry is also recognising the professionals and also mentioned a few achievements of the Institute in the last year. He welcomed all for the program.

CMA Garg in his opening remark thanked the dignitaries for their august presence. He said that during 2019, the dream to achieve 5 trillion-dollar economy was not viewed to be feasible with 1.8 to 1.9 trillion-dollar economy due to COVID and other issues, and hence it was changed to achieve a 5 trillion-dollar economy by 2026 -2027. He even said that a 10 trillion-dollar economy can be achieved by 2035. He mentioned the concept of value and value addition and explained that in order to achieve a growth in real terms India require value addition. The government is not an entrepreneur; government's job is governance. Government is not a good businessman and anywhere where public sector or the government is exclusively or predominantly in charge of the production system, that country doesn't grow that much and the private sector is the real driver or the engine of growth. So therefore, enterprises which bring risk capital is rewarded in the form of the profits, that is their takeaway. The government also gets all its income in the form of taxes from the value additions, if there is no value added there is a loss and therefore there is no tax. He said value added is the most important construct. The growth is intrinsically associated and connected with the evaluated value additions and that's why all businesses of whatever value and value added they do is important and that should be our central focus. By giving an example of the power industry he said, we produce roughly about eight lakh crore worth of power at cost today in the country but the price which it collects is about six lakh crores so the power distribution system loses two lakh crores a year. Two lakh crores is not a small amount, it's roughly about point seven five percent of your total GDP and this 2 lakh crore is large enough to make the state finances suffer. They provide about one lakh to 1.25 lakh crores of subsidies every year to keep this power sector afloat, still it leaves about 70K-75K crores of losses which are uncovered.

He went on to say that if you maintain a sick company that sick company is not contributing anything, but if you make a new investment that new investment makes the new value addition and so there are lots of ideas which are there. We can look at opportunities in privatization, the opportunities in agriculture, financial sector etc. so those opportunities need to be seized. He said that there are two things, one big reforms and bold reforms are needed, second we need to seize the opportunities which are there. If we do that then we have a good chance of creating a 10 trillion-dollar economy if we don't then we will probably grow at four to five percent or so as we have grown and may be by 2050 we'll have a 10 trillion-dollar economy. He mentioned the three things that are absolutely essential; the ease of doing business, cost of doing business and the real business opportunities. The complete privatization of business is necessary for the best capital and resource productivity and the big policy driver for sustainable and fast growth is to undertake wholesale privatization of public sector. The purpose of the government and the purpose of business is different. The government's job is to govern, to provide the public goods and services, the law and orders, the defence, the security, the judicial system, environment, macroeconomic stability, inflation control and those kind of things.

Producing goods and service is the private citizens job because the citizens produce for consumption by another citizen, they can handle that relationship barrier well. At the time of Independence, we had no public sector in the country we had only two major businesses with the government one was railways and another was the post and telegraph services. Other than that everything was private. The government's job is to create competition in the economy and to ensure that the consumers are protected and therefore, the government, when it gets into business which is what the public sector is doing, it tries to work as a businessman but it doesn't because of its own constraints. While discussing about the role of CMAs, he emphasised on value addition in Accounting rather than simple Cost and Financial Accounting. The speaker enumerated various lucid and elaborate practical examples to elegantly place his discussion. There was active participation from the members who clarified their doubts in the Question and Answer session.

CMA Chittaranjan Chattopadhyay, Central Council Member and Chairman, BFSI Board, summarised the session and presented the vote of thanks to the learned speaker CMA Garg and the immediate past president CMA Biswarup Basu for organising this program. He also thanked the President of the Institute, CMA P. Raju Iyer for attending thus program despite his very tight schedule.

Lighting of the Lamp: CMA Avijit Goswami, Former Council Member, CMA Chittaranjan Chattopadhyay, Chairman, Banking, Financial Services and Insurance Board (BFSIB), CMA Harijiban Banerjee, Past President, CMA Biswarup Basu, Past President, CMA Subhash Chandra Garg, Chief Guest, IAS (Retd), Former Finance Secretary, Govt of India, CMA P.Raju Iyer, Immediate Past President, CMA Amal Kumar Das, Past President and CMA Arundhati Basu. (L to R)

CMA P. Raju Iyer, Immediate Past President greeting CMA Subhash Chandra Garg, Chief Guest, IAS (Retd.) Former Finance Secretary, Government of India (R to L)

CMA P. Raju Iyer, Immediate Past President welcoming the audience with his opening speech on the seminar “Reforms For Sustainable Growth and Value Creation In India- Role of CMAs”.

CMA Biswarup Basu, Past President inaugurating the seminar “Reforms for Sustainable Growth and Value Creation in India-Role of CMAs” with the special address.

CMA Subhas Chandra Garg, Chief Guest, IAS (Retd.), Former Finance Secretary, Government of India deliberating multifaceted aspects of the nature and magnitude of reforms to be undertaken and the paramount role of CMAs in the process.

CMA Chittaranjan Chattopadhyay, Chairman, Banking, Financial Services and Insurance Board (BFSIB) captivating the audience with his speech on the role of Cost and Management Accountants.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory Body under an Act of Parliament

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Members in Industry & Placement Committee

CMA CAMPUS PLACEMENT PROGRAMME 2022 : Phase - I

(November 2022)

For Qualified Cost Accountants of June 2022 Term

CMA CAMPUS PLACEMENT RECORD

Location wise Number of Candidates Selected by Various Companies

Location	Candidates
Delhi	61
Kolkata	50
Mumbai	102
Chennai	126

Total **339** Placements in Phase - I

Recruiting Companies

Highest Package ₹28 lakh p.a. | Average Package ₹12 lakh p.a.

Forthcoming Phases of Campus Placement Drives will be announced shortly

Behind Every Successful Business Decision, there is always a CMA

CMA Vijender Sharma elected as President and CMA Rakesh Bhalla as Vice President of the Institute for the year 2022-23

Welcome of CMA Vijender Sharma, President of the Institute at CMA Bhawan (HQ), Kolkata

ICAI-CMA SNAPSHOTS

CMA Vijender Sharma, President along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extending greetings to Shri Manoj Pandey, Joint Secretary to the Government of India, Ministry of Corporate Affairs on 29th November 2022.

CMA Vijender Sharma, President along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extending greetings to Shri Manoj Govil, IAS, Secretary to the Government of India, Ministry of Corporate Affairs on 29th November 2022.

CMA P. Raju Iyer, President along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Council Member and CMA Neeraj D. Joshi, Council Member of the Institute attended a meeting with Mr. Jeff C Thomason, President & CEO IMA, Mr. James Gurowka, Senior Vice President IMA and other representatives of IMA USA on 18th November, 2022 at Sofitel BKC, Mumbai.

(R to L) Shri Kalyan Kumar Ghosh, Former Finance Advisor, WBSEDCL is felicitated by CMA Chittaranjan Chattopadhyay, Chairman, BFSIB

CMA Vijender Sharma, President along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extending greetings to Smt. Anuradha Thakur, IAS, Additional Secretary to the Government of India, Ministry of Corporate Affairs on 29th November 2022

CMA P. Raju Iyer, President along with CMA Vijender Sharma, Vice President and CMA Chittaranjan Chattopadhyay, Council Member of the Institute attended a meeting with Dr. Gary Pflugrath, Executive General Manager Policy and Advocacy, Ms. Deborah W.K Leung, Executive General Manager, International, CPA Australia, Mr. Leslie Leow, General Manager, Emerging Markets- International, CPA Australia and other officials of CPA Australia on 18th November, 2022 at Jio World Centre BKC, Mumbai.

CMA P. Raju Iyer, President along with CMA Vijender Sharma, Vice President, CMA Chittaranjan Chattopadhyay, Council Member and CA Mukesh Singh Kushwah, Government Nominee to the Council of the Institute attended a meeting with Mr. Mike Driver, Past President, Mr. Dan Worsley, CEO and Mr. Drew Cullen (Director of Policy and Membership), CIPFA on 20th November, 2022 at Jio World Centre, Mumbai

ARTIFICIAL INTELLIGENCE AND PROBABLE FUTURE OF ACCOUNTANTS

Abstract

Human civilization is built on new and evolving technological advancements. Adaptation of technologies have always reduced human efforts and replaced labour intensive jobs. They have always created more jobs than replacement. But, what about a technology which mimics human intelligence and have capability to replace humans rather than jobs. It is believed that adaptation of more and more AI will impact almost all sectors and all professions in terms of permanent job loss. Accountancy may be one such profession which would likely be impacted by AI. Accountancy consist of both routine as well as unique work like audit, analysis, investigation etc. While the former is repetitive in nature, the later involves a lot of creativity, intelligence and experience, which is believed to be distinctive to humans. Therefore, a question arises as to whether AI can replace accountants involved in creative jobs. Further, where does the current research on AI stand and what will be its future scenario?

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"Everything that can be automated will be automated."
– Robert Cannon

INTRODUCTION

In today's modern world Artificial Intelligence (AI) has entered in almost every facet of our life. Any discussion on AI is incomplete without acknowledging the fact that which and how many jobs it is going to replace. Many compare the emergence of AI and its impact on job market to the automation experienced in industries during the late 1990s and early 2000s due to introduction of computerisation and robotics in the manufacturing processes. It is believed that almost all sectors and all professions will experience job losses due to adaptation of more and more AI. Accountancy is one such profession which is likely to be impacted by AI. "To what extent" is the question examined in this article. There is a disclaimer that this article is about the impact of AI on accountants (i.e. practitioners of accounting profession) and not on accounting.

ACCOUNTANCY – MEANING

The Merriam Webster dictionary defines 'accounting' as "*the system of recording and summarizing business and financial transactions and analysing, verifying and reporting the results*". The Longman Business Dictionary defines 'accountancy' as "*the profession or work done by accountants in keeping the financial records of organizations and in giving advice to clients on tax and other financial matters*". Similarly, an 'accountant' can be termed as a professional who does the accounting activities on behalf of the organization.

ACCOUNTING FUNCTION AND ROLE OF ACCOUNTANTS

In the modern era, apart from the traditional book keeping and reporting, accounting function helps in budget preparation, cost optimization, forecasting growth opportunities, assessment of future expenditure needs, providing customized information to stakeholders, etc. Accountants now are working in various positions in different industries, influencing the performance of business by providing input on matters like management of financial resources, cash flow, taxation, audit etc. Accountants have developed incredible analytical capabilities through years of practical training and gained massive work experience which enables them to read between lines and provide useful insights to management through reports and dashboards. Today, accountants are working as freelancers, virtual advisers, chief financial officers, business advisors, financial analysts, chief executive officers, finance directors, management accountants and many other similar roles. More so, the role of accountant is now metamorphosed into a business adviser.

(source: https://chacc.co.uk/wp-content/uploads/2020/01/Accountants-Role.png)

Another important aspect of accounting function is independent evaluation and certification. Third party certification and audit is not only a statutory requirement but also essential for the trust of involved stakeholders.

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

The term 'Artificial Intelligence' (AI) was coined in mid-1950s by John McCarthy widely regarded as the father of Artificial Intelligence. He defined Artificial Intelligence as "*the science and engineering of making intelligent machines*". Artificial intelligence (AI) is a science of stimulating human intelligence wherein machines are programmed in such a way that it not only thinks like human but also imitate their actions.

Use of tools by humans is not new. It is as old as human civilisation. With every introduction of a new technology, the life of humans became relatively easier. Throughout the human civilization, adaptation of new technologies has always replaced human labour. Therefore, the fear of getting replaced by machine is not new. However, we may not forget that it may be correct that technological advancement may have taken away many jobs, but it has also created many more jobs. Therefore, it can be interpreted that there may be loss of job at individual level but at collective level creation of new jobs are much more than the total loss of job. Technological advancement basically upgrades the job.

AI, unlike any previous technologies, is not only a tool to assist humans but also has the capacity to replace them. Many believe that soon AI powered systems will be able to exceed the human capacity in any subject. But many others are also sceptical because they believe that human experience laced with creativity is unique and cannot be replicated, let alone be replaced.

WHETHER AI WILL MAKE THE ACCOUNTANTS REDUNDANT?

Accounting includes both routine and unique type of works. Routine work like book keeping has already been replaced by automation. But what about unique work undertaken by accountants like audit, analysis, investigation etc., which involve lot of creativity, intelligence and experience, which is believed to be unique to humans. Whether this can also be replaced by the AI? Before we explore the answer to this question, let us see what is meant by 'creativity', which is so unique to us humans.

Definition of creativity

American Psychological Association's Dictionary of Psychology describes creativity as the ability to produce or develop original work, theories, techniques, or thoughts. The traditional psychological definition of creativity includes two parts: originality and functionality. In addition, U. S. Patent Office, has a third criterion, namely, the creative idea should not be a natural extension of already existing idea.

Scientific psychology has identified three types of creative thinking namely (a) combinational, (b) exploratory, and (c) transformational creativity. The first type involves novel combinations of existing ideas. The second and third types of creativity are interlinked. Exploratory creativity involves the generation of novel ideas by the exploration within the existing conceptual space. While the ideas generated are unexpected, they are within the same structured space. Under transformational creativity one or more of existing structure or dimension of the space are also transformed resulting in generation of new structure which could not have arisen before.

Can AI replace creativity?

It can be debated as to whether creativity is an inborn quality for humans. But with surety, it can be said that creativity can be learned and practiced. Skills like writing, drawing, or singing can be acquired and perfected through learning and practice. Learning modules are also based on the database of the past experience or happening.

AI through machine learning modules can observe, collect data and learn to gain creative skills. In fact AI can learn creative skills more quickly and efficiently based on far more data available to it, which a normal human could not comprehend even in his entire lifetime. Today, AI has already entered into a number of creative fields which were traditionally thought to be "uniquely human". For example, a digital artwork by Sophia (an AI based robot) was sold for nearly $700,000 and an AI-generated Portrait of Edmond Belamy developed using a Generative Adversarial Network (GAN) was sold for over $430,000. Another, AI based model DALL-E 2, developed by OpenAI, can generate images from mere textual descriptions. Similarly, in music, the song "Break Free" which used AI-composed notation and instrumentation has generated over 2 million views. Another AI-powered virtual idol named Hatsune Miku, boasts nearly 200 million views across its viral music videos.

Where does the current AI stand?

AI has already proved its mettle against the humans in their field of expertise. For example, in the year 1997, the IBM's chess supercomputer Deep Blue defeated the world chess champion Garry Kasparov. Similarly in 2005, 5 five vehicles made their way around in DARPA Grand Challenge – a race for autonomous vehicles across over 100 kilometres of off-road terrain in the Mojave desert. In 2011, IBM's Watson won the TV game show Jeopardy against champion players. This was significant because Jeopardy is language based game where creative-thinking is required. In 2015, during the annual ImageNet challenge, researchers have concluded that machines are now outperforming humans in recognising and describing images. Another significant milestone was achieved by AI in 2016 when AlphaGo, created by Deep Mind defeated world GO champion Lee Sedol over five matches. This victory was also very significant for AI researchers, as GO is one of the most complex game ever in the history of humanity. The list can go on and on.

Although, the feats achieved by AI are impressive, it is far from reaching the human level intelligence. All the examples above are categorised under the Artificial Narrow Intelligence (ANI) or weak AI. ANI is specialised in one area and programmed to operate under limited parameters. Even though ANI is best in its own sphere, it cannot perform any other task.

Theoretically, after ANI, AI should evolve to Artificial General Intelligence (AGI), or strong AI, involving a system with comprehensive knowledge and cognitive computing capabilities such that its performance is indistinguishable from that of a human, at least in those terms. After reaching AGI, AI should almost immediately evolve to Artificial Super Intelligence (ASI), which according to Nick Bostrom, a Swedish philosopher and author of "Superintelligence: Paths, Dangers, Strategies", is a super intelligent artificial system that would possess "an intellect that is much smarter than the best human brains in practically every field, including scientific creativity, general wisdom and social skills".

It must be remembered that humans are able to collect and interpret data in any format, be it audio-visual, analog or digital or any other format

Before we conclude, let us revisit the question again, "Whether AI will make the Accountants redundant?" The answer will be "NO". Whether, this answer will change in the near future? The answer is again "NO". The reason is at the current level of research in AI, i.e. at ANI level, AI can perform singular task only and it cannot perform generalised task. Again, it can be asked "Will it not be possible to create an AI based accounting program which will perform all the functions of modern Accountant?" Yes, it is possible but such program will suffer due to unavailability of all data in machine readable format. It must be remembered that humans are able to collect and interpret data in any format, be it audio-visual, analog or digital or any other format. For interpretation of data by machine, the data needs to be interpreted in machine readable format. At present, data generation is not exclusive to machines and the type of data generation is not homogenous. Until such time, when all data would be generated by machines in homogenous format, it would be extremely difficult to build program which would completely replace accountants. Another factor which makes the accountant relevant is their independency in certification and audit. It is questionable whether such certification or audit by a computer program would fulfil the statutory requirements of relevant laws.

CONCLUSION

It is clear that at current level of research also, AI is capable of outperforming human counterparts, if they are specifically designed to do so. However, at present, even if a customised AI application is designed to perform all tasks of accountants, still it may not be able to replace the accountants due to limitation of unavailability of complete data and independency of accountants in some of their activity. May be in future, when all data would be generated by machines only and AI will reach its theoretical level of super intelligence, where it would be much smarter than the best human brains in practically every field then it may be possible that AI would fully replace the accountants. Whether or when would AI reach that level, only time will tell. MA

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FUTURE OF ACCOUNTING PROFESSION AND EDUCATION: REVISITING ROLE OF UNIVERSITIES

Abstract

Comparing Indian professional accounting qualifications with the global professional qualifications, the study recommends an overhaul of the curriculum and emphasizes the need for stronger relationship between Indian universities and professional bodies.

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INTRODUCTION

Both accounting education and profession are no exception to the age old saying "change is the only constant" as both have been continuously evolving and adapting to fulfil the ever-changing needs of various stakeholders. During and post Covid 19 educators had to move to online teaching and examinations (*Sangster, Stoner & Flood, 2020),* while accounting professionals were forced to *work from home*. In both cases it required acquiring and applying new digital skills and competencies and rethinking the value processes. In order to comprehend the role of Indian Universities and their relationship with professional bodies, this descriptive paper based on content analysis of secondary data, apprises the entry requirements, qualification structures, pass rates and the links between Universities and professional bodies. It also reflects on the curriculum content offered by Indian Universities and highlights what needs to change so that accounting education and profession remain relevant and competitive.

Professional accounting qualifications are perhaps the only certifications where the professional entities have more influential role compared to the role played by Universities. As International Federation of Accountants (IFAC) states "Education is a structured and systematic process aimed at developing knowledge, skills, and other capabilities; a process that is typically but not exclusively conducted in academic environments". Member bodies of IFAC across the world set standards for entry, education and assessment of candidates to join the profession as a member and be eligible for 'practice'. Universities in many parts of the world shoulder major part of this responsibility.

As described by the IFAC, "Initial Professional Development (IPD)', the learning and development process (education, experience, and assessment) inculcates professional competence among aspiring professional accountants. This process builds on general education, and develops (a) technical competence, (b) professional skills, and (c) professional values, ethics, and attitudes among aspiring accountants". As advocated by *Lawson et al. (2013)* professional accounting education curricula across the world has been continuously updated by respective member bodies to integrate the skills and competencies (Table 1) required of professional accountants.

Table 1: Competencies required for accounting professionals

Foundational Competencies	Accounting Competencies	Broad Management Competencies
Communication	External Reporting & Analysis	Leadership
Quantitative	Planning Analysis & Control	Ethics & Social Responsibility
Analytical Thinking and Problem Solving	Taxation Compliance and Planning	Process Management & Improvement
Interpersonal	Information System	Governance, Risk & Compliance
Technological	Assurance & Internal Control	Additional Core Business Competencies

	Professional Values, Ethics & Attitudes	

Source: Lawson et al. (2013)

IFAC permits members to set the eligibility conditions for entry into the profession by themselves or through higher education institutions (*BDO, 2022).* In the latter case, the respective professional entity may help the institution of higher learning to imbibe the purpose of the International Accounting Standards (IES), and communicate that compliance with its requirements would enable students for membership in the respective national accounting body. IFAC further states that the entry requirement should neither be too high (causing unnecessary barriers to entry to the profession), nor too low (causing individuals to believe falsely they have a likelihood of completing the education successfully).

SKILLS AND GRADUATE ATTRIBUTES IN DEMAND

The World Economic Forum Report of 2018 on Future of Jobs, predicts most of the roles (5 out of 10) currently occupied by accounting or commerce graduates to decline constantly (Table 2). The 'Future of the Jobs' report further concludes that skills set required in both the new and old jobs will continuously evolve requiring reskilling of at least 50 per cent of the workforce. The good news for accounting and commerce graduates is that they will fit into many of emerging roles if the traditional curricula embrace the technology driven new skills set. The need of the hour is that the core concepts of the domain knowledge are intertwined with the emerging skills sets to ensure that the accounting and commerce graduates remain ahead in the race for the emerging job roles.

Table 2: Top 10 emerging and declining roles/jobs

S No	Emerging roles	Declining roles
1	Data Analysts and Scientists	Data Entry Clerks
2	AI and Medicine Learning Specialists	Accounting, Bookkeeping and Payroll Clerks
3	General and Operations Managers	Admistrative and Executive Secretaries
4	Software and Applications Developers and Analysts	Assembly and Factory Workers
5	Sales and Marketing Professionals	Client Information and Customer Service Workers
6	Big Data Specialists	Business Services and Administration Managers
7	Digital Transformation Specialists	Accountants and Auditors
8	New Technology Specialists	Material-Recording and Stock-Keeping Clerks
9	Organisational Development Specialists	General and Operations Managers
10	Information Technology Services	Postal Service Clerks

Source: World Economic Forum, 2020

SKILL SETS REQUIRED OF A NEW AGE PROFESSIONAL ACCOUNTANT

A. Domain Knowledge

Professional accounting bodies across the world require their members to have proficiency in broader areas of accounting and related knowledge spheres known as four pillars of professional accounting education: (i) financial accounting and reporting, (ii) tax compliance, (iii) finance, management accounting & strategy, and (iv) auditing and assurance.

B. Soft Skills

The accounting profession worldwide embraced the soft skills as an integral part of the pervasive skill set of professional accountants and there has been efforts to integrate it into both academic and professional curricula, though, there are still concerns about lack of these skills among professional accountants especially in Indian context.

C. Leadership Skills

Leadership skills among accounting professional is becoming increasingly important and it's lack is a cause of concern as leadership skills is not currently dealt with in the accounting curricula both academic or professional in depth and breadth, it should have been. This results in accounting graduates graduating without the required knowledge, skills and mindset required of a potential leader.

D. Digital Skills

While the profession is striving to fully integrate the pervasive soft skills, the ever-changing environment made it compulsory to embrace the digitisation and technology integration in to accounting curricula. The wind of change started by Industry 4.0 has only been fanned further by the Covid 19 in to a storm of change. To weather this storm and survive, the accounting profession has to adapt fast to the rapid technological advances. Industry 4.0 technologies shall heighten automation of accounting information systems for real-time access to information and information security, faster execution and greater transparency *(Yuksel, 2020).*

A CLOSER LOOK AT EXISTING CURRICULA OF INDIAN UNIVERSITIES

The above discussion highlights the fast-changing education and competency profile of a professional accountant who has understanding of various knowledge domains and their amalgamation; greater focus on ability to gain new knowledge and skills and is in a position to harness the potential of Industry 4.0 technologies. A scrutiny of model curriculum (used as a proxy) issued by University Grants Commission in 2021, reveals that a lot has to change if Indian Universities / Institutions offering accounting and commerce education wants to be at the forefront in supplying newer skills required by the job market. Graduate attributes (Figure 1) and qualification descriptors (Figure 2) outlined by the UGC Learning Outcomes-Based Curriculum Framework (LOCF), 2021, falls short when compared with the skill sets identified by the World Economic Forum (Table 2).

Figure 1: Graduate Attributes

Figure 2: Qualification Descriptors

Figure 3: Focus areas of UGC B. Com. model curriculum 2021

Source: UGC, 2021

Skills related to information technology, data analytics etc. got some mention in the LOCF. However, it is evident that it lacks the depth and breadth it deserves. In order to produce graduates who possess skills required by Industry 4.0, the curriculum needs an overhaul integrating the core of commerce and accounting with emerging technologies. *(García & de los Ríos, 2021; ACCA, 2016).* As can be seen from the above Figure 3 the newer skills required by the market have not made good inroads into model curriculum. There is an urgent need to introspect and revamp the curriculum to include a variety of broad-based courses including data analytics, accounting information systems, EDP audits, and also exposure to coding based analytical tools such as R and Python. Cloud based computing, distributed ledgers and other applications of block chain technology have to be embraced as well.

Accounting of future shall include "more all-inclusive corporate reporting, which tells less about the numbers and more about the narrative of the organization" (*Islam, 2017*). To achieve this the accounting education provided by Indian Universities shall sooner than later marry to new forms of corporate reporting and disclosures (e.g.; integrated accounting), and an appreciation for interdependencies of financial and non-financial reporting.

UNIVERSITY INDUSTRY COLLABORATION: A GLANCE AT SOME PROFESSIONAL QUALIFICATIONS

To understand how well the industry recognizes the contribution of academia and what role may be expected of Universities across the globe, especially in Indian context, let us have a look at well-known professional accounting qualifications across the world and the role played by universities in providing education leading to attainment of professional qualifications.

Table 3: Comparison of accounting qualifications

USA	UK		RSA	India		
CPA	ACCA	CGMA	CA	CA	CS	CMA
Eligibility						
University Degree with certain number of accounting credits, some earned at the upper-division or graduate level	Senior Secondary with English and Maths or Accounting	Senior Secondary	Accredited CTA or honours degree	Senior Secondary; Commerce Graduate or postgraduate with 55%, Or Non-commerce graduates with 60%	Senior Secondary for foundation course OR Graduation	Senior secondary for foundation course OR Graduation

Number of members						
665612	233000	137000	38000	330000	65000	75000
Number of Papers						
4	13	13	5	16	17	16
Exemptions						
None	Up to 9	Up to 8 for UG & up to 11 for ICWA / M COM	None	None	None	None
Work Experience						
1 year	3 years	3 years	3 years	3 years	3 years	15 months
Pass rates (latest year)						
up to 60%	Up to 85%	Up to 87%	Up to 80%	About 12%	About 15%	About 15%
Reliance on University (eligibility + exemptions) Score allotted on a 10 points scale						
5	7	7	8	3	3	3
Source: Web pages of AICPA, ACCA, CIMA, ICAI, ICMAI, ICSI, SAICA etc.						

As can be noted from the foregoing Table, AICPA depends heavily on Universities to provide the right quality of students. It requires a prospective accountant to have "50 Credits with a concentration in accounting. Out of which a minimum of 15 hours must be at the upper-division or graduate level" (AICPA, 2022).

Though one may join the ACCA journey without a University degree, ACCA well recognises the role of universities in provision of accounting education and accords up to 9 exemptions based on courses covered through university degree (ACCA, 2022). CGMA is almost similar with ACCA in respect of entry and exemption criteria. Chartered Institute of Management Accountants UK also has partnerships with universities to offer joint degrees.

The AICPA and CIMA partnership known as 'The Association', for CGMA Finance Leadership Program (FLP) has "partnered with 49 Universities to offer the FLP to their students in parallel to degree studies and built new relationships with 35 Fortune 500/FTSE 100/global brands that sponsored their staff to take the FLP at partner Universities" (The Association Integrated Report, 2021).

> **Accounting of future shall include "more all-inclusive corporate reporting, which tells less about the numbers and more about the narrative of the organization"**

South African Institute of Chartered Accountants (SAICA) has a very unique and presumably the most influential and deep alliance with universities in South Africa. A student having either a CTA or a B. Com. (Honours) is eligible to write Part 1 of the qualifying examination (SAICA, 2022). It is worth noting that Universities are entrusted to provide education up to the level of the CTA/ Honours, entry to which is also through an accredited bachelors programme (B Com / B Acct). SAICA regularly assesses monitors the academic programmes to ensure quality. This strong relationship has resulted in very high pass rates at QE. SAICA ensures conformity with quality expectations by of higher education institutions / universities, which allow students entry into qualifying examination. As 'a low' or inadequate pass rate could result in these universities losing SAICA accreditation, they try best to grill the students enrolled at university to the extent possible. Those who are not able to meet expectations are given opportunity to laterally migrate to other programmes. To ensure rigor in teaching learning process, certain minimum number of faculty has to be qualified CAs, who are compensated for the loss of income compared to professional practice through an additional remuneration known as subvention. SAICA assists accredited universities in making provision of such subvention for members lecturing on accredited programmes.

As can be noted from the foregoing Table 3, the Indian industry or accounting professional bodies rely the least on Universities so far as eligibility for entry to professional education or provision of professional education is concerned. A student with no University degree can enter any of the accounting qualifications through entrance examination / foundation route. Further, the professional bodies do not recognise the academic achievements of students at University as there is no provision of any exemptions for whatever level of academic excellence a student may have achieved. There is lack of a sound formal professional engagement between the professional bodies and Universities in India. The working of two closely related entities (University & Profession body) in silos is only detrimental to the overall faster growth of the accounting profession. The question that goes unanswered for long is: Is it lack of trust or matter of identity or identity clashes?

CONCLUSIONS AND SUGGESTIONS

Appraising the IFAC guidance and comparing it with entry requirements laid down by ICAI, ICSI and ICMAI, one can comfortably say that perhaps in the pursuit of 'inclusiveness' Indian institutes have diluted the entry requirements. Further the absence of University – industry interface appears to have affected the outcomes reflected in very low pass rates. Emerging questions include: Whether the content meets today's changing requirements of business and industry. Whether it is delivered in the best possible way and whether it has a prudent mix of theory and practice?

For accounting profession to remain competitive, and University education (especially in Indian context) to be relevant, there is need for robust cooperation between industry (practicing accountants) and academia to complement each other's efforts in furthering the cause of accounting profession. The following suggestions are put forward so that accounting (education and profession) remains at the forefront.

i. Strong relationship between practicing accountants and academia

ii. Greater reliance on universities: so that education part can be taken care by universities and training part remains with the professional bodies. Some of the initiatives that can be taken up immediately include:

   a. Universities to offer tuition for major part of the (at least up to inter) professional accounting curriculum.

   b. Accreditation of university programmes by professional bodies.

   c. Exemptions for those having accounting degree from accredited Universities

   d. Alternative pathways for those unable to complete professional accounting programmes.

iii. Major overhaul of curriculum (both academic and professional)

   a. Integration of Industry 4.0 technologies into university and professional curricula.

   b. Greater emphasis on professional conduct, governance and ethics.

   c. Embracing the content aimed at leadership development

   d. Inclusion of more practical aspects into academic curricula.

iv. Capacity building among universities and Robust Continuous Professional Development (CPD) opportunities for academics

v. Lecturing experience of up to one year to count towards practical experience requirement.

vi. Jointly developed simulation opportunities for the benefit of both academic and professional education clients. MA

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ROLE OF FINANCE PROFESSIONALS IN THE RAPIDLY EVOLVING FINTECH ERA

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Abstract

The emerging changes in FinTech space have brought in a plethora of new opportunities as well as new challenges to the finance professionals. We will see in this article about some of the unique value additions a finance professional can make in the changing business landscape. We will also explore the impact of AI on the roles of various professionals including Cost Accountants.

INTRODUCTION

The theme of the recent Regional Cost Convention 2022 organised by the Southern India Regional Council of the Institute of Cost Accountants of India namely "**Changes in the Business Landscape: Future Ready Finance Professionals**" is illustrative of the vision statement of the Institute which states : 'The Institute of Cost Accountants of India would be the preferred source of resources and professionals for the financial leadership of enterprises globally**'**. India is undergoing a paradigm changes in the digital era. To encourage innovation and at the same time to regulate the FinTech industry, RBI has started its own regulatory sandbox ecosystem in August 2019. The recent introduction of Central Bank Digital Currency (CBDC) by the RBI is the latest development in the digital space. The emerging changes in FinTech space have brought in a plethora of new opportunities as well as new challenges to the finance professionals. Some of the unique value additions a finance professional can make in the changing business landscape are discussed in this article. It also explores the impact of AI on the roles of various professionals including Cost Accountants.

FIN TECH AND CHANGING BUSINESS LANDSCAPE

Financial Services Board (FSB), an international body that monitors and makes recommendations about the Global financial system defines FinTech as "technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services". The quick, cost effective and easily accessible solutions offered by FinTech segments have taken financial services to every nook and corner of the country. Due to their customer centric products, FinTech companies have started posing challenges to traditional financial institutions. Of late, traditional financial institutions have begun collaborating with FinTech companies. This is a win-win situation for both of them and customers are also benefiting in the process by being assured of traditional security as well as innovative services.

> **The quick, cost effective and easily accessible solutions offered by FinTech segments have taken financial services to every nook and corner of the country**

Shri Pramod Kumar Ojha, in his article on "FinTech: Financial inclusion or Banking disruption", in the July-Sept 2022 issue of Bank Quest, traces the evolution of FinTech as follows:

Period	1866-1967	1967-2008	2008 - current	
Era	Fintech 1.0	Fintech 2.0	Fintech 3.0	Fintech 3.5
Key elements	Infrastructure/ computerization	Traditional/ internet	Mobile/start-ups/new entrants	
Remarks	Telegraph, railroad and steamship were utilized for cross border financial transactions	Shifting from analog to digital	Distrust of the traditional banking and emergence of new player	Globalization of digital banking

Source: Shri Pramod Kumar Ojha's illustration based on Bester A, 2022.

He uses the mnemonic 'SECURE' - Security, Education, Customer, Undertaking, Regulation and Evolution – in the article, to stress the features necessary for the robustness of the financial institutions in the changing business landscape. Under the point 'Education', he elaborates that frontend professionals have to understand the needs of the customers, sell them appropriate products and have to pass on the feedback of customers to backend professionals who in turn have to envisage and develop customer centric products.

Education is the key for the success of finance professionals in this ever evolving FinTech era. It is necessary for professionals to become tech savvy and to update their domain knowledge continuously.

FINANCE PROFESSIONALS AND ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is one of the buzz terms in digital sphere in this decade, though the term itself was originally coined as early as 1955 by American computer scientist Dr. John McCarthy. FinTech innovations under the category of Data Analytics and Risk Management have resulted in large scale use of Artificial Intelligence and Robotics in the day to day operations.

AI has already integrated with the operations of the public and private sector organisations which is visible from the number of chat bots we come across in our day-to-day life. Top public sector and private sector banks in India have introduced AI in their customer service applications in the form of chat bots. Airlines and Government offices like Income Tax office offer AI based customer service solutions.

Newspapers and journals carry latest updates in the field of AI on continuous basis as to the trends, needs, opportunities and skill gaps in AI nationally and globally. Keeping pace with latest technological trends is essential for a professional to survive in the profession.

CHANGING DIMENSIONS

AI has influenced and enhanced the capabilities of today's industries and this trend has been termed as Industry 4.0. The term 'Industry 4.0' was defined and discussed by renowned economist Dr Klaus Schwab, founder of World Economic Forum, in his article, 'The Fourth Industrial Revolution - What It Means and How to respond' published in a magazine in December, 2015. His candid observations that 'We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before." are worth remembering.

That article identified the various industrial revolutions as follows:

Version	Driving Force	Achievement
Industry 1.0	Water and steam power	Mechanisation of production
Industry 2.0	Electric power	Mass production
Industry 3.0	Electronics & Information Technology	Automation of Production
Industry 4.0	Industry 3.0 & Fusion of Technologies	Evolving Cyber Physical Systems

Industry 4.0 can be described in short as an industrial internet of things, powered by Artificial Intelligence, leading to smart factories. The consequences of smart factories are well picturised by the jocular remarks of distinguished professor Warren Bennis that 'The factory of the future will have only two employees, a man and a dog. The man will be there to feed the dog. The dog will be there to keep the man from touching the equipment'! In this challenging situation, the professionals have to look for opportunities for adapting themselves to new trends and fit themselves in new roles and functions.

HOW DOMAIN EXPERTISE AND AI SUPPLEMENT EACH OTHER

Applications of Artificial Intelligence are distinguished by their subject matters. In the book 'Introduction to AI', authors Eugene Charniak and Drew McDermott point out how AI in a particular domain is interlinked with domain knowledge. They highlight it by the example of robotics, stating that many of the issues that arise in the construction of robots which weld together car parts are more properly in the domain of mechanical engineering than AI. It is then needless to say that mechanical engineers have a role to play in efficient building of robots. Thus, the professional horizons of mechanical engineers are modified and expanded by robotics.

AI in banks so far caters mainly to answering customer queries. The ideal starting point for AI is in governance functions at the regulator level. AI in Reserve Bank of India's regulation and supervision functions, when integrated with AI in governance of individual banks, will ensure automatic reporting for disclosure and compliance purposes. Such a scenario, *inter alia*, will make divergence in NPAs (that is a sort of under reporting of NPAs by banks) a thing of the past. AI can play a big role in the day-to-day operations of bank like credit appraisal, credit assessment, follow up, recovery, provision making and NPA analysis. AI can capture unusual behaviour and data in a transaction and keep a watch on suspicious transactions, money laundering and frauds.

In the July-September 2018 issue of Indian Institute of Bankers' magazine Bank Quest, Dr A. S. Ramasastri, Director, Institute for Development and Research in Banking Technology (IDRBT) has written an article on "Banking on Technology in the next decade: From SMAC to FABS?". He narrates therein that banks have adopted the SMAC technologies – Social, Mobile, Analytics and Cloud – very innovatively and are further moving towards four emerging technologies of FABS – 5G, AI, Blockchain and Smart things. In building such AI applications and in interpreting the results of such analytics, the operational horizons of banking professionals are reshaped.

In corporate governance too, AI can play a very significant role. Board room diversity is much advocated nowadays. Diversity among members of Board in many aspects like age, sex, experience, expertise, outlook, style and approach ensures effective and innovative decision making. But in practice such diversity in the Board room is hard to obtain. Now AI with its vast repository of knowledge of past situations and decisions can assist in Board room. With due protection for data privacy, Big Data Analytics (BDA) can help in saving the wisdom of Boards in repositories, transcending time and distance barriers. AI can be integrated with Board functions either as a supervisory or semi supervisory model or as an independent neural network with deep learning capabilities. Thus, AI can add to the independence of the Board in its true sense.

AI can get insights of customer preferences, by observing his spending pattern and suggest customer specific products and services. Techniques of Data Warehousing and Data Mining facilitate top executives to drill down and get new, trendy and hidden information from databases. Based on the external and internal information of an organisation, AI can aid in its goal setting and direction, to achieve its mission and vision. Thus, AI can help not only in operations but also in governance.

ROLE OF DOMAIN EXPERTS IN BUILDING ERROR FREE AI

Dr Rekha Melwani, in her article on AI in the March 2019 issue of The Management Accountant, quotes Bill Gates as stating, 'The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency. The second is that automation applied to an inefficient operation will magnify the inefficiency'. Thus, the success of BDA and AI will be determined by the underlying quality and veracity of data. The adage regarding computer applications, viz. 'Garbage in, Garbage out' is apt for BDA and AI too. This emphasises the need for cleansing the data to a certain extent, for making meaningful predictions. The role of domain experts is valuable in assuring data veracity. They have a role in interpreting AI based decisions too.

ROLE OF DOMAIN EXPERTS IN BUILDING ETHICAL AI

At the annual meet of World Economic Forum (WEF) in Davos in January 2020, Shri Satya Nadella, CEO of Microsoft and Professor Klaus Schwab, founder of WEF, discussed a number of issues. It was interesting to listen to them discussing ESG (Ethics, Sustainability and Governance), AI and ethical AI. They touched upon points like whether ethics in AI is needed to be built at regulator level or at implementation level. It is obvious from this discussion that domain experts have a role in building ethical AI too.

CONCLUSION

In the scenario of AI integrating with corporate governance, professionals need not worry about the diminishing importance for their traditional professional wisdom. Their contribution is still required for building relevant AI applications and for interpreting the information thrown by AI.

Charles Darwin's theory that "It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change" is true in the ever evolving FinTech era. Thus, finance professionals who keep adapting to innovations in the FinTech industry will always be the most sought after. MA

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UNDERSTANDING THE ATTITUDE OF BUSINESS ORGANISATIONS OF INDIA TOWARDS SUSTAINABILITY CSR GOALS THROUGH GREEN ACCOUNTING: FUTURISTIC WAY

Abstract

Sustainability has become the essential concept in this era as mankind is facing many challenges. The greenhouse gases and climatic changes across the globe are putting many odds in front of the humanity. Business organizations are the responsible elements of the economy which directly contribute to the development and growth of the countries but also cause irreparable damage to the natural ecosystem. If the strategies of business organizations deliberate on sustainability the rectifications to damage caused due to business activities can be reduced. This article is an attempt to understand the attitude of the organizations towards sustainability by virtue of green accounting.

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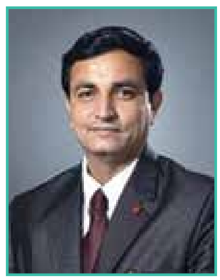

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INTRODUCTION

पर्यावरणनाशेन नश्यन्ति सर्वजन्तवः ।

पवनः दुष्टतां याति प्रकृतिविकृतायते ॥

(Meaning of above Shloka is: Due to pollution of environment, all beings are destroyed, the winds get vicious and the nature becomes hostile.)

Pace of growth and uncontrolled exploitation of the natural resources have resulted in massive release of greenhouse gases. No one is ready to compromise with speed of the growth. Business organizations are working continuously to meet the unstoppable demands of the human societies. While doing so it becomes inevitable to cause damage to the natural ecosystems. An industry always aims towards efficiency, productivity, and output in huge scale.

Industries evolve on multiple aspects for development and growth in themselves, in which, sustainability is one of the pillars. Such aims can be fulfilled through sustainability in an industry while enhancing themselves through regular upcycling on multiple parameters.

Hon. Prime Minister of India Shri. Narendra Modi while inaugurated the World Sustainable Development Summit 2021 emphasized on climate justice for fighting against climate change. He said, "Climate justice is inspired by a vision of trusteeship- where growth comes with greater compassion to the poorest. Climate justice also means giving the developing countries enough space to grow." Starting with the earliest visible initiative in 2009, India has travelled quite a distance with respect to ESG, though a lot more needs to be done in supersonic speed to meet the SDGs by 2030.

Environmental, Social and Governance (ESG) are three key factors used to measure a company's sustainability and social responsibility performance. It is about creating a tangible, practical plan that archives the real results. Success is not only about climate change, diversity and disclosures but also about embedding these principles more across one's business from investment to sustainable innovation. Business Responsibility and Sustainability Report (BRSR) brings India's sustainability reporting to Global reporting standards.

Green accounting is a popular term for combined environmental and economic accounting at national and corporate levels. The purpose is to capture the long-term sustainability of economic performance, undermined by environmental impacts. Sustainability is not limited to a green product line, good intentions, or a major marketing campaign. Sustainable development must be evaluated from different perspectives to ensure that it is fulfilling the existing needs without compromising future generations' chances of fulfilling their own needs. Companies that apply it into their business strategies will have the higher probability of being sustainable. Corporate Social Responsibility (CSR) is becoming a vital part of the corporate world. Social initiatives are usually associated with doing well and 'doing the right thing' and today many companies feel they must contribute to this development of society especially in environment sustainability.

The present researcher has taken into consideration around 61 different business houses belonging to a variety of sectors across Pan India. The sectors vary from services, manufacturing, pharma, banking finance, agriculture etc.

OBJECTIVES

1. To understand the effect of introduction of Sustainability Goals in 2013 by the Government of India on business organizations
2. To understand the attitude of the business organizations towards sustainability goals and the CSR practices.

HYPOTHESIS

H1 - Sustainability initiative introduced by Government of India has an impact on business houses for considering sustainability as part of CSR.

RELATED THEORY / BACKGROUND

In 2013, India became the first country to mandate corporate social responsibility under the Companies Act 2013. Top 500 listed firms in India by market cap were instructed by SEBI to disclose indicators of business responsibility and sustainability through Business Responsibility Reporting (BRR). SEBI in India plays the role of market regulator, regulating securities and protecting the interest of stakeholders in the market. SEBI is also responsible for the implementation of an efficient ESG policy mechanism. In 2021, SEBI issued a circular containing details of new sustainability related reporting requirements called the Business Responsibility and Sustainability Reporting (BRSR). BRSR reporting is mandatorily applicable to top 1000 listed entities, which is being replaced by the enhanced framework of BRSR.

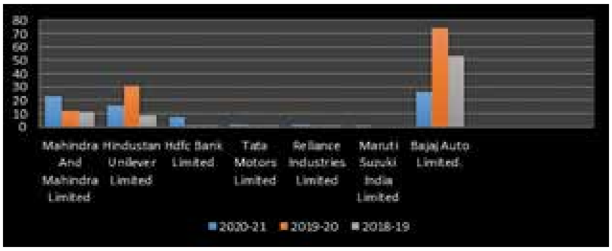
There are many unique challenges required to be addressed; if we do not address the current problems we are facing on the planet and the environment, they will quickly grow into such proportion and magnitude that it will become more difficult to deal with them .. The Sustainable Development Goals (SDGs) are to be viewed as targets that require a concrete plan to overcome these challenges.

During the last financial year, GCPL diverted 63 per cent of its CSR budget to initiate medium to long-term livelihood recovery programmes to support over 9000 nano entrepreneurs. In addition to this, GCPL achieved zero waste-to-landfill and water positivity in the last financial year. The company is 100 per cent Extended Producer Responsibility compliant. It takes back the post-consumer plastic packaging waste equivalent to the plastic packaging it sends out.[1]

Analysis of the role and positioning of welfare activities conducted by SMEs in India and the manner in which CSR is understood and followed internationally by the large corporations around the world reflects a huge variance. MNC's generally hold a stakeholder view while considering and implementing their CSR strategies while the SMEs may consider a social capital view in working on their CSR plans. A dialogue between the SMEs and the MNCs would provide better opportunities and environment for furthering the CSR activities in the developing world mitigating both challenges .. [2]

During FY2021, Vedanta spent over Rs. 331 Crore on social development activities, spread across core impact areas of education, health, sustainable livelihoods, women empowerment, sports and culture, environment and community development. Its flagship CSR initiative for women and children has touched a new milestone, with establishment of 2,300+ Nand Ghars in 11 States and has positively touched the lives of ~52,000 women and ~65,000 children. [1]

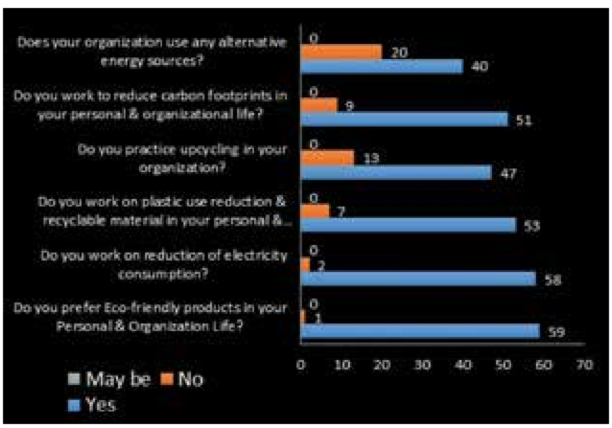
CSR is the familiar practice in India but majority of the business houses work on some other agenda than sustainability. After 2013 there are large business houses turning towards sustainability goals. It is quite understandable that most small business houses dependent on this big business houses try to follow large business houses, may be unknowingly or because of resonance effect. But the major industries which fall in the small and tiny/ micro categories are not made accountable.



Green and clean energy, efficient use of the resources, reduction in carbon footprints can be the baby steps towards sustainability goals.

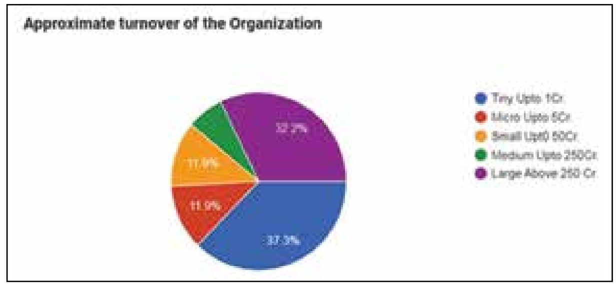
The following diagram depicts the attitude of the organizations towards sustainability. Plastic or hazardous materials need to be replaced by eco-friendly degradable materials. The alternate energy sources need to be searched and taken into consideration for the reduction in greenhouse gases.

Upcycling needs to be looked at as a sign of prestige. Indian culture is all about optimum utilization of resources and conservation of natural eco-systems. We need to reverse our colonial thought of "use and throw" culture to useful upcycling culture of traditional India.



DATA ANALYSIS

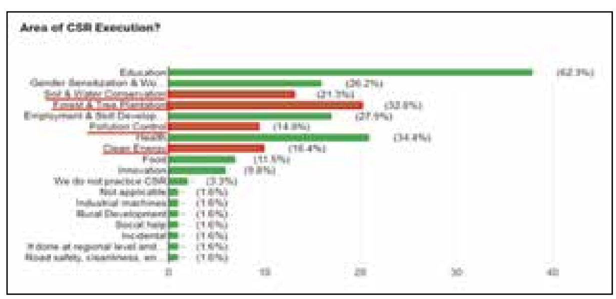
For the present paper the researcher has contacted 61 different business organizations across pan India which includes tiny to large organizations. Personal interviews and structured questionnaires were used as an instrument of the data collection. About 37 per cent of the business houses belonged to tiny industries and if we club micro, small and tiny industries, they contribute around 61 per cent of the Indian business organizations which are out of the tax regime. The mandatory part of CSR is also not applicable to around 61 per cent of the companies as the norm desired turnover is not fulfilled by tiny, small and micro-organizations.



It is even more interesting to find out that they are engaged in voluntary CSR activities which indicates their attitude towards sustainability. The attitude of their leadership and the practices they adopt in the organizations are reflections of their value systems and literacy towards sustainability. It was promising to observe that the organizations are ready to divert from their current engagement of the CSR towards sustainability.

Through the open-ended questions to the respondents who are the decision makers in the organizations some prudent facts came out about sustainability:

- Sustainability is going to create a huge impact on the future, which needs to be implemented on priority and in a systematic way. For the same, awareness and active participation by individuals and organizations is important.
- Efficient and sustainable path will be followed by individuals and organizations with support of Government through various direct and indirect benefits to them.
- Every individual citizen should contribute in whatever possible manner towards sustainability. We must stop using plastic and start using alternative products. We must use and encourage the use of renewable energy. Children must be educated and women must be empowered so that they too can contribute towards sustainable development of the society. We must stop wasting water and must practice water harvesting. Use of public transport must be preferred over private vehicles.



From above depiction it could be seen that the major thrust of the CSR is on education. Though it is an essential part of the nation's mission it needs to be complimented with the sustainability goals as we need the earth to inhabit. If there is no life education will be meaningless.

Industry 5.0 needs to be sustainability driven as we are on the threshold of permanent damage to planet. We have interfered with the natural ecosystem to such an extent that it demands immediate corrective actions. Green accounting is the way to audit the real efforts in this direction. The systematic and proportionate CSR fund allocation can lead to sustainable green ecosystem. The proportion of the sustainable CSR can be worked out in synchronization with Government, business organizations and individual citizens of the country.

HYPOTHESIS TESTING

The researcher used the regression analysis for hypothesis testing which rejects the hypothesis that denotes that the Government is not the only machinery as most respondents belonged to the tiny, micro and small companies.

This also points out the fact that efforts need to narrow down to individuals through the value addition. Education can work in synchronization with sustainability. Most of the business organizations are tiny, small and micro which are out of the blanket of CSR rules. Sustainability goals need to be the integral part of the business organization irrespective of their size and turnover.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	1
R Square	1
Adjusted R Square	65535
Standard Error	0
Observations	2

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	112.5	112.5	#NUM!	#NUM!
Residual	0	0	65535		
Total	1	112.5			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95%*	*Upper 95.0%*
Intercept	62	0	65535	#NUM!	62	62	62	62
X Variable 1	-5	0	65535	#NUM!	-5	-5	-5	-5

Variable	**Description**	**Frequency**	**Percentage**
Type of Organization	Large Scale	15	25.00%
	Medium Scale	12	20.00%
	Small Scale	20	33.33%
	Micro Scale	13	21.67%
Type of Sector	Agriculture	3	5.00%
	Commerce & Banking	5	8.33%
	Manufacturing & Chemical Industries	8	13.33%
	Construction	5	8.33%
	Education	11	18.33%
	Hotel Industries	1	1.67%
	Pharma Industries	1	1.67%
	Other	26	43.33%

Approximate Turnover	Tiny upto Rs. 1 Cr.	22	36.67%
	Micro upto Rs. 5 Cr.	8	13.33%
	Small upto Rs. 50 Cr.	6	10.00%
	Medium upto Rs. 250 Cr.	4	6.67%
	Large Above Rs. 250 Cr.	20	33.33%
Budget Provision	Upto Rs. 1 Lakh	20	33.33%
	Upto Rs. 10 Lakhs	10	16.67%
	Upto Rs. 20 Lakhs	2	3.33%
	Upto Rs. 50 Lakhs	3	5.00%
	Above Rs. 50 Lakhs	10	16.67%
Alternative Energy Sources	Solar Energy	48	80.00%
	Wind Energy	1	1.67%
	Hydropower Energy	0	0.00%
	Bio Energy	1	1.67%
	Not Applicable	10	16.67%

CONCLUSION

The Government has introduced sustainability goals to the industries and it is being observed that the industries are undergoing a metamorphosis through CSR initiatives. It is interesting that the tiny, small and micro industries are also aware of the sustainability goals and willing to contribute though it is not mandatory for them.

This brings out one possibility for the Government to take these industries also into consideration and to motivate them towards the sustainability goals. They can be brought into the mainstream and provided with some benefits in terms of tax / subsidy / reward / appreciation towards contribution, etc. which will be major boost to the sustainability achievement. This research brings another possibility of systematic division of CSR funds towards the sustainability goals. Some percentage of CSR funds can be made mandatory spend on sustainability.

RECOMMENDATIONS

1. Regulation by Government authorities of business organizations for keeping specific percentage of their eligible CSR fund for environmental sustainability and strict enforcement of this policy..
2. Making green operations policy or SOP through business organizations and its implementation for achieving environmental sustainability which can be employee appraisals, vendor development, tendering process criteria by considering contribution to green movement at individual or organization level.
3. Individual accountability towards green movement through plastic free life, usage of public transport or e-vehicles, making oxygen parks with the help of tree plantation, enhancing social life towards environmental sustainability etc.

PROPOSED MODEL

After analysing the response of the various business houses on the responsibility and accountability about sustainability the researcher proposes a conceptual model depicting the inter-relationship of the various phenomenon for sustainable ecosystem. The first step towards sustainable ecosystem is developing a systematic CSR.

This means that the goals and agenda need to be planned and implemented rather than keeping it open ended and voluntary. Responsible Government is also an important link to make it a part of the law and practice. It is essential to inculcate a sense of accountability in the business houses

Industries evolve on multiple aspects for development and growth in themselves, in which, sustainability is one of the pillars

for sustainability. Individuals need to behave in sustainable manner for the achievement of the sustainable eco-system.

This leads to the sustainable value system in the sustainable ecosystem. Deviations in individual behaviour can be controlled by building a strong value system.

Things which are not measured are not controlled. For this purpose green accounting can work as an effective vigilance system. The proposed model is depicted in the following flowchart::

Sustainable Ecosystem Model by Hemant P. Deshpande

Government policies and framework need to be reviewed and redesigned to attain the sustainability goals. MA

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1st December, 2022

NOTIFICATION

In pursuance of Regulation 146 of the Cost and Works Accountants Regulations, 1959, the Council of the Institute at its 337th Meeting held on 11th September, 19th October and 27th November, 2022 by virtue of power conferred therein has decided to change the name of "The Institute of Cost Accountants of India, Nashik-Ojhar Chapter" to "The Institute of Cost Accountants of India, Nashik Chapter".

The Institute of Cost Accountants of India – Nashik Chapter
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(CMA Kaushik Banerjee)
Secretary

A STUDY ON THE ROLE OF CRYPTO CURRENCY AND BLOCKCHAIN IN AUDIT AND INVESTIGATION

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Abstract

This article attempts to highlight the emergence of crypto currency and blockchain technology and its application in audit and investigation. It also focusses on the role of blockchain technology in today's audit performance. It outlines the need to revamp the audit procedure with the newer developments of crypto currencies.

INTRODUCTION:

The driving factor which led to the development of Bitcoin, (in present days' terminology the Cryptocurrency) demands the recollection of the concept of money that goes way back in history. (*Zibin et al., 2017*) Money is considered to be the medium of exchange and during 6000 BC the barter system was existent as the oldest medium of exchange. In 700 BC the metal coins were introduced and later in 550 BC gold coins were used as currency. After the US became independent from the British rule, during 1792 under the Coinage Act otherwise known as Mint Act, the United States Mint was set up by the Congress. With the National Banking Act of 1873, Dollar was considered to be the only legal currency in US and it was also pegged against silver. Due to voluminous deposits of silver in the US in 19th century the intrinsic value of silver got reduced significantly and therefore the currency was pegged against the gold standards considering it to be a stable medium of exchange but of late with the real time realization it was understood that war and threats can challenge the economy and can destabilize the gold standard as a medium of exchange. The Federal Reserve Act of 1913 introduced the Federal Reserve, a private bank which emerged as a custodian of the American monetary policy. During the depression of 1930, the value of gold got diminished as US printed currencies was equivalent to the amount of gold reserves. In 1933 the US decided to do away with the gold standard and the Government printed more money without limitation and during that period the currency dollar was pegged against faith and trust. And the trust was broken by the subprime crisis of 2008 due to unscrupulous insurance and banking practices. Consequently a major chunk of the risk was transferred to the investors and this disaster triggered the need for transparency and decentralization in banks and financial markets. In 2009 Satoshi Nakamotu introduced the Bitcoin when it was felt that the medium of exchange must be decentralized and controlled. Bitcoin, a software driven cryptography is a peer to peer digital currency transacted freely without the aid of the intermediaries and it is governed by Blockchain technology. (*Simanta Shekhar Sarmah,2018*). The ideal copies of Blockchain are stored into thousands of the independent computers as it does not enable tampering of the data because if an intruder wants to do so then he should not only break some impossible inter-connected codes but also need to figure out how to change the information in every single computer. The distributed ledger is both secured and transparent. Over a period of time emergence of Blockchain technology is observed across the nations. *(Henry et al., 2018).*

DIFFERENCE BETWEEN CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY

The difference between the two lies in their names. The former one is a digital currency in a virtual environment which enables one to transact and the latter is a technology without any monetary value. Blockchain is a distributed ledger that can store any kind of data.

APPLICATIONS OF CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY

The application of the crypto currency is looming large. The penetration of the crypto currency is being observed in varied sectors such as education , travel and tourism, real estate, gaming, retail, fast food restaurants, social media. The application is also gradually gaining prominence in forensic operations. Forensic accountants can work with crypto market on the issues such as insurance claim accounting, cyber loss, investigation, valuation of damages, fraud and corruption, litigation support and expert witness testimony.

ROLE OF CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY IN FINANCIAL FORENSIC

Crypto currency is an asset and not a liability. Forensic accountants are required to trace the originality of the transactions through the utilization of the facility of crypto currency. The viability of the audit is questioned due to the non availability of the documents and evidence in the hands of the entity. The traditional audit loses its weightage due to malpractices involved in it and the same can be attributed to the failure of the organization to equip the auditor/s with sufficient inputs or the non -judicious and unscrupulous work culture adopted by the auditors. With the emergence of the crypto currency, Bitcoin and maintenance of the safe and secured database due to the implementation of the block chain technology the distortion of facts and figures can be arrested at large and transparency can be restored in the operation and performance. Crypto currency insurance market is also evolving with newer policies and financial forensics are also carving out its niche in crypto.

NEED FOR FORENSIC AUDIT AND INVESTIGATION

Forensic audit is done at the behest of the organization when the urgency to unearth the frauds occurred in the organization. Statutory audit is aimed at substantive and compliance procedure whereas the forensic audit goes a step beyond these two and becomes investigative in nature and necessitates in-depth checking. While performing the forensic audit the auditors are most often facing the challenges of the availability of the information as the companies may or may not provide the needful updates due to intentional suppression or can be negligent in record keeping. Had the organization taken up the responsibility of maintaining the documents under the block chain technology then retrieval of the same would have been at ease. Success of the investigation primarily depends on the intensity of the disclosure of facts made by the organizations.

BENEFITS OF BLOCKCHAIN IN IMPROVING THE AUDIT

- Provides a better approach to auditors
- Focussing on testing of controls
- Realtime data accessing
- Speeds up the auditing process.
- Authenticates the records for scrutiny.
- Maintains transparency and accuracy.
- Avoids routine and duplication of work.
- Saves valuable time of the auditor.

MEANING OF BLOCKCHAIN FORENSICS

Blockchain is the use of scientific method to manipulate data in order to create useful and informative descriptions of the manipulated data. It is the process through which digital assets are analysed. It creates unimpeachable audit trail. Blockchain forensics consists of tracing and tracking the originality of the crypto currency assets by looking at the transaction data.

APPLICATION OF BLOCKCHAIN IN AUDITING

Blockchain provides transparency in the process of operation. The clarity of the audit process is at stake and the same is substantially satisfied by the blockchain technology. Repetition process is eliminated as certainty over transaction is assured. The automation on the other hand also brings in data management and data security. Data alteration is minimized. Safety and security are kept intact. Though the auditors may be at the risk of loosing their reputation of the audit work , the data availability is at ease provided the organization has implemented blockchain. Audit job has become more easier than before.

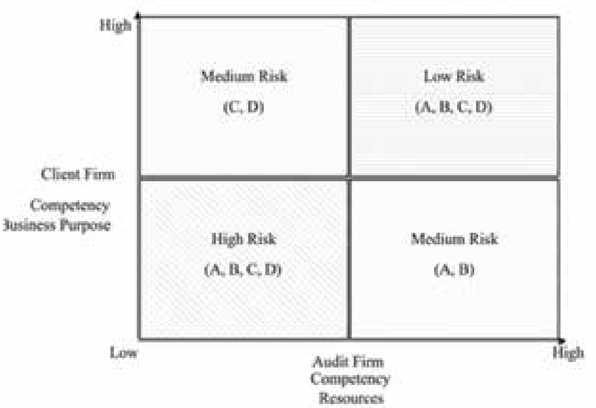
MEANING OF CRYPTOCURRENCY AUDITOR

A crypto currency auditor is one who audits different types of blockchain based cryptocurrency.

CHALLENGES OF CRYPTO CURRENCY AUDIT

There is lack of relevant information relating to official procedures and guidelines on crypto currencies and this is the major source of challenge for the auditors. Public Company Accounting Oversight Board (PCAOB) listed digital assets as a key area of focus in its Inspection Outlook. A real challenge is when the auditor needs to identify crypto currency issue and risks during client acceptance and retention. The discussion is always limited to crypto currency assets as a medium of exchange in a public blockchain.

Following Figure shows the assessment of the riskiness of a client acceptance and retention decision:



The denominations are as follows:

With respect to audit firm -

A. Audit firm's requisite competence in crypto currency to recognize risks and design appropriate auditing procedures as High/Low.

B. Audit firm's access to resources such as appropriate mix of personnel and technology as High/Low.

With respect to client firm -

C. The client's requisite competence in crypto currency to recognize and mitigate associated risks as High/Low.

D. The alignment of the client's crypto currency transactions with business purpose and the strategy as High/Low.

The Crypto currency Risk Framework consists of *financial assertions, description, typical audit procedure used for testing at assertion level and additional consideration for auditing crypto currency*. Financial assertions include existence testing, rights and obligations testing, completeness testing, accuracy and valuation testing, authorization testing, cut off testing, occurrence testing and adequate disclosure testing.. Typical audit procedure included the methodologies followed in the process of testing the particular assertion level. Additional consideration is the requirement for the audit of crypto currencies. The auditor should consider the volume and dollar value of crypto transactions and valuation within the accounts. Risk would be higher for crypto asset specific accounts or transactions which surpass the overall materiality allocated to a specific account balance. The emerging nature of the currency, dearth of authoritative guidance for accounting, reporting, disclosure and auditing, absence of rules and laws, unnamed parties involved in the crypto currency-based transactions, materiality of the transaction volumes and amounts push up the risk of mis-statement of facts. The auditor may have to check the crypto currency wallet in case of non-existence of the transactions. Development of the audit software is required to verify that the specific crypto currency-based accounts belong to the concerned client. In case of violation of laws the auditor needs to ascertain the potential losses which may accrue to the client. The crypto transactions are non-reversible as they are Blockchain enabled and therefore, the auditor needs to examine the client level data entry, integrity control, access and storage control.

The auditor may also have to gather sufficient evidence of the clients and exchange internal control processing accuracy to provide assurance. On a whole the basis of measurement of the crypto currency, the volatility of the currency also needs to be considered for disclosure.

CONCLUSION AND SUGGESTIONS

In an audit involving crypto currency-based transactions, effort should be made to escalate the crypto currency competence level via training and education, hiring the audit team experts and also to create a crypto aware culture within the audit firm. During the audit planning stage, the auditors should analyse and provide careful consideration for compensating controls. With the development of new crypto currencies, the audit procedures should be continuously reviewed and updated to consider additional risks which remained unmitigated. MA

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ACCOUNTING FOR CRYPTO CURRENCIES

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Abstract

Now-a-days crypto currencies are making headlines regularly for all sorts of negative news including large frauds by cyber criminals. All these have made crypto currencies even more controversial. There is, however, another aspect of crypto currencies which is no way less controversial than the crypto currencies themselves. This is accounting for crypto currencies. The present article is a humble attempt to highlight all such debatable issues associated with recognizing, measuring and disclosing crypto currency transactions with reference to existing national and international accounting regulations.

INTRODUCTION

The first decentralized cryptographic currency, Bitcoin, was introduced by pseudonymous developer Satoshi Nakamoto in 2009. Since then, the world has, so far, witnessed the advent of numerous crypto currencies. As of March 2022, there were more than 9,000 crypto currencies available in the marketplace. Of these, more than 70 claim a market capitalization of hopping $1 billion or more. Accordingly, crypto have emerged as a profitable form of investment asset offering effective diversification opportunities for individuals and corporates. Even then, this new financial innovation is always surrounded by controversies for various issues. Accounting for crypto currencies is also one of them.

CORE DEBATE OVER ACCOUNTING FOR CRYPTO CURRENCY

The prime reason for the debate over accounting for crypto is the absence of any definite Accounting Standard dealing with it. Neither any IFRS nor the US GAAP deals with the issues associated with accounting of crypto currency. Hence, one is to resort to the existing Accounting Standards to record crypto currency transactions. However, the Standards recommend accounting treatments for definite asset classes only. Unfortunately, experts are not unanimous in identifying crypto as a definite asset class. This is because, though originally intended to be a digital alternative of physical cash, crypto currencies are being viewed as an investment asset. In addition, accounting in the books of crypto miners also pose challenges.

FUNDAMENTALS OF CRYPTO CURRENCIES

Crypto currency is a form of digital currency that exists only virtually and uses cryptography to secure any transaction undertaken in it. The transactions in crypto currencies are recorded in a public or distributed ledger with the use of blockchain technology which prevents it from being counterfeited or double spent. In a blockchain's distributed ledger, records are always kept in multiple nodes i.e., computers. These nodes verify and store data. Each time a new transaction is completed, the record is added to a 'block' of data. The block is then added to a chain. The entire ledger is updated whenever a new transaction occurs.

CRYPTO CURRENCY ACCOUNTING – ISSUES AND SOLUTIONS

The issues relating to crypto currency accounting may be discussed from the viewpoint of holders and miners as follows:

Accounting for Cryptocurrencies in the Books of Holders

Cryptocurrency is an asset to its holders and should be recorded as such. However, the appropriate model of its accounting depends on the class of asset it is identified with.

- ***Identification of the Asset Class to Which Crypto Currencies Should Belong***

As per IFRS (and corresponding Ind ASs), following are the possible asset classes to which crypto currencies may belong.

i. *Cash:* IFRS has not provided any definition of the term "cash". IAS 7, *Statement of Cash Flow*, only states that "cash comprises cash on hand and demand deposits"(IFRS Foundation, n.d.-b). However, IAS 32, *Financial Instruments: Presentation* says that "currency (cash) is a financial asset because it represents the medium of exchange and is therefore the basis on which all transactions are measured and recognized in financial statements"(IFRS Foundation, 2008). Thus, the Standard uses the term "cash" synonymously with "currency" which is recognized as legal tender (fiat currency) in a given jurisdiction.

The instances in which crypto currencies are used as a "medium of exchange" are minuscule. Similarly, though many of the Governments are contemplating on issuing digital currencies, hardly any one of them has given any crypto currency such status. Thus, it appears that crypto currencies cannot be treated as cash.

ii. Cash Equivalent*:* IAS 7 defines "cash equivalents" as "short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value"(IFRS Foundation, n.d.-b). It seems that crypto currencies can never fall in this category as these are highly volatile and hence "subject to significant risk of changes in value". Crypto currencies may be "readily convertible" but not to a "known amounts of cash" like bank FDs.

iii. *Financial Asset:* Some experts argue that crypto currencies are "financial assets" under IAS 32 and should be accounted for as "financial asset at fair value through profit and loss (FVTPL)" as per IFRS 9, *Financial Instruments*(IFRS Foundation, n.d.-f), as they have an active market (crypto exchanges).

As per Ind AS 32, financial assets represent cash, equity instruments, "a contractual right to receive cash or other financial asset" or "a contract that will or may be settled in the entity's own equity instruments"(IFRS Foundation, 2008). Crypto currency does not represent any "equity" interest in another entity and hence is not an equity instrument. Moreover, though crypto currency transactions are recorded using blockchain or distributed ledger technology, no contractual relationship arises automatically between the holder and another party. In other words, a person associated to a crypto currency blockchain does not enjoy any contractual relationship with another participant in the same crypto currency blockchain. Consequently, a holder of crypto currency does not have any enforceable claim on the crypto currency miner, the Exchange or another holder; the holder rather requires to identify a willing buyer to realize the economic benefit of his holding of crypto currency. Therefore, crypto currencies do not have any enforceable contractual right and hence are not financial assets.

iv. *Investment Property:* Some experts argue that crypto currency holdings should be "accounted for as Investment Property". However, as per IAS 40, *Investment Property*, "an investment property is any property (land or a building—or part of a building—or both) held to earn rentals or for capital appreciation or both"(IFRS Foundation, n.d.-e). Though crypto currencies are often held by the holders for capital appreciation, they are not "land or a building" i.e., physical asset. Hence, they cannot be treated as investment property.

v. *Inventory:* IAS 2, *Inventories*, states that inventories are "assets which are (a) held for sale in the ordinary course of business; (b) in the process of production for such sale; or (c) in the form of materials or supplies to be consumed in the production process or in the rendering of services"(ACCA Global, n.d.). Thus, if an entity holds crypto currencies "for sale in the ordinary course of business", it may consider the same as inventory. In such a case, its measurement will be guided by IAS 2. However, it must be kept in mind that if crypto currencies are held as inventory by commodity broker-trader with the objective of "selling them in near future and generating profits from fluctuations in price"(IFRS Foundation, n.d.-a), its measurement will not follow IAS 2.

vi. *Intangible Assets:* An asset is a resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity (IFRS Foundation, n.d.-d). Crypto currencies are legally owned and the holder derives future benefits as a result of a future sale or exchange. Hence, these are assets for sure.

Now, as per IAS 38, an intangible asset is "an identifiable non-monetary asset without physical substance"(IFRS Foundation, n.d.-d). An asset is identifiable if it is capable of being sold or transferred separately from the holder or results from contractual or other legal rights(IFRS Foundation, n.d.-d). Since, crypto currencies can be traded on a Crypto Exchange or in P2P transactions, they are separable. Again, as per IAS 21, *The Effects of Changes in Foreign Exchange Rates*, "the essential feature of a non-monetary item is the absence of a right to receive (or an obligation to deliver) a fixed or determinable number of units of currency"(IFRS Foundation, n.d.-c). The value of a crypto currency is not fixed or determinable but rather volatile. Therefore, crypto currencies are non-monetary. Finally, as crypto currencies are digital currencies, they lack physical substance.

Thus, crypto currencies can be treated as intangible assets with infinite life following the provisions of IAS 38.

In June 2019, in response to IASB's request, the IFRS Interpretations Committee published an agenda decision where it advocated to account for crypto currencies as intangible assets as per IAS 38 unless they are "held for sale in the ordinary course of business", in which case IAS 2, Inventories, would apply(Ernst & Young, 2019). It also stated that crypto

The prime reason for the debate over accounting for crypto is the absence of any definite Accounting Standard

currencies held as inventory by a commodity broker-trader "should be valued at fair value less costs to sell" (Ernst & Young, 2019) and not as per IAS 2. US GAAP also does not allow crypto currencies to be treated as inventory but considers it as infinite life intangible assets.

TABLE 1: IDENTIFICATION OF CRYPTO CURRENCIES AS AN ASSET CLASS UNDER EXISTING ACCOUNTING REGULATIONS

IFRS	Categorization	Acceptability
IAS 7: Statement of cash flows	Cash or cash equivalent	No
IAS 32: 'Financial instruments: Presentation'	Financial assets	No
IAS 40: Investment property	Investment property	No
IAS 2: Inventories	Inventories	Yes (under certain conditions)
IAS 38: Intangible assets	Intangible assets	Yes

Note: US GAAP treats cryptocurrencies as infinite life intangible assets.

⊙ *Accounting Treatment*

Based on the above discussion, the accounting treatment of transactions in crypto currencies can be explained in the light of the applicable IAS/IFRS and US GAAP as follows:

a. *Crypto currencies as Inventories:* If crypto currencies are identified as inventories, they shall be initially recognized as "cost" as defined in IAS 2. The costs of purchased crypto currencies "would typically comprise the purchase price, irrecoverable taxes and other costs directly attributable to the acquisition of the inventory (e.g., blockchain processing fees)"(Ernst & Young, 2021). Subsequently, on every reporting date, the crypto currency inventory will be valued at the "lower of cost and net realizable value" and be reported as a current asset. Additionally, disclosure under IAS 2 shall have to be made.

   However, if the crypto currency inventory is held by a commodity broker trader, it will be valued at "fair value less costs to sell only"(IFRS Foundation, n.d.-a). Accordingly, disclosure under IFRS 13 will matter.

b. *Crypto currencies as Intangible Assets:* Following IAS 38, crypto currencies "should be measured initially at cost"(IFRS Foundation, n.d.-d). The cost of acquiring crypto currencies would typically include the purchase price and related transaction costs (e.g., blockchain processing fees). When crypto currencies are acquired in exchange of another non-monetary asset, the cost is measured at fair value unless the transaction lacks commercial substance or fair value is not determinable reliably. In such cases, the same is measured at the "carrying amount of the asset given up"(IFRS Foundation, n.d.-d).

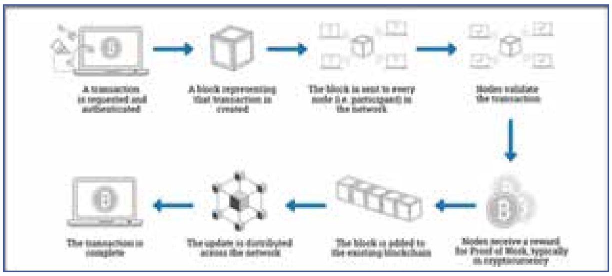
On subsequent measurement, a firm may follow either "cost model or revaluation model". Under cost model, crypto holdings shall be measured at "cost less accumulated impairment"(IFRS Foundation, n.d.-d) only as amortization is not allowed for infinite life assets. Impairment testing shall be done at least annually. Subsequent to an impairment, if the value of the asset increases, the entity must record an impairment reversal as per IAS 36, *Impairment of Assets*. Under revaluation model crypto currencies will be "measured at their fair value on the date of revaluation less any subsequent impairment losses"(IFRS Foundation, n.d.-d). The resultant gain shall be booked in revaluation reserve through Other Comprehensive Income (OCI). The corresponding balance of revaluation reserve will be transferred directly to retained earnings (not through Income Statement) on derecognition of the crypto holdings. However, a decrease below cost will be recorded in profit and loss. Subsequent losses after initial gain will first be deducted from revaluation reserve followed by net income (loss). Relevant disclosure requirements under IAS 38 and IFRS 13 shall also apply.

Under US GAAP, crypto currencies are accounted for as per ASC 350, *Intangibles – goodwill and other*, "as an infinite life intangible asset"(FASB, n.d.). Accordingly, it is initially recognized at cost. Though amortization does not apply, on subsequent measurement, it is tested for impairment at least annually. The difference between carrying amount and fair value is treated as impairment loss. Consequently, the asset is measured at cost less accumulated impairment loss. Impairment reversal is, however, not allowed under US GAAP. In India, additional disclosure under Schedule III of Companies Act, 2013 also applies.

Accounting for Crypto currencies in the Books of the Miners

There may be people who undertake transactions in crypto currencies together. All these transactions are recorded in a ledger and in order to secure the records, a 'proof of work' is attached. As the ledger is decentralized, everyone has a copy of the same. Each time a new transaction is completed, the record is added to a 'block' of data which then forms a chain. In order to ensure that everybody has the same copy and also to avoid fraudulent transactions, miners come into play. Miners (also known as validators) validate the transactions by use of cryptography and include them in the block. For this, they charge some transaction fees. In addition, they also create blocks which requires lots of computing for solving complex mathematical puzzles to guess the unique 'hash' or code or 'proof of work' that can validate the block. For this, they receive block rewards in form of crypto currencies.

FIGURE 1: CRYPTO MINING



- ***Accounting Issues with Crypto Miners***

The issues may be addressed as follows:

a. *The Mining Activity:* Crypto mining is nothing like a mining activity undertaken for natural resources. Thus, IFRS 6, *Exploration and Evaluation of Mineral Resources* does not apply.

b. *The Miners' Service:* Crypto mining is basically a service. Hence, there may be possibility of applying IFRS 15, *Revenue from Contracts with Customers*, to account for the block rewards. However, block rewards are paid by the system algorithm for correctly guessing the code and validating the block. Hence, there is no counterparty and hence no contract. Hence IFRS 15 also does not apply. Resorting to the "Conceptual Framework for Financial Reporting" (IFRS Foundation, 2010), we may, suggest the following treatment for the block rewards:

   i. Include the block rewards in net income as and when they arise and credit "Other Income".

   ii. Debit the block rewards as Intangible Assets or Inventories based on the purpose of its holding.

   For transaction fees paid by the originators of transactions (i.e., customers), a contract is implied and hence, IFRS 15 shall apply. The miner shall include the fees as 'revenue' in the Statement of Income with a debit to Intangible Assets or Inventories, as applicable.

c. *Expenses Incurred by the Miners:* The process of successfully guessing the 'hash' requires lots of computation and expenditure on computer systems and technology. However, miners only provide service and do not develop any intangible asset. Thus, it is never a research and development cost as per IAS 38. The costs should fully be charged to the net income.

CONCLUSION

The growing acceptance of crypto currency among corporate entities (for example, Tesla reported a purchase of bitcoin worth $1.5 billion in January 2021, Micro Strategy had $6 billion bitcoin in April, 2022), are making its accounting complicated. This is because, corporate holding of crypto currencies may invite additional complexities like translation of crypto assets, inter-subsidiary dealings in crypto currencies etc. Keeping this in mind, in USA, the FASB on May 11, 2022 has added a project to its technical agenda to develop crypto currency accounting guidelines. On October 12, 2022, FASB members have agreed on fair value-based measurement of crypto currencies though a formal guideline is still due. IFRS Interpretation Committee is also acting in similar spirit. Hopefully, a lot of ambiguity will be removed once the specific guidance is available in this regard. Till then, cryptocurrency accounting will remain a challenge for the accountants. MA

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ACCOUNTING INFORMATION SYSTEM (AIS): ROLE OF IoT IN OFFSHORE OUTSOURCING

Abstract

With the information revolution, the scope of accounting has become more dynamic and comprehensive. Execution of work along with their reporting in the financial statements, have all been integrated and simultaneously done now. With the example of a diagram of an Accounts Payable (AP) process, it is understood that the IoT enables the system to ensure less human interference as the devices are capable of communicating with one another independently. Although automation reduces the requirements of skilled human resources to a great extent, in terms of accuracy and transparency, the accounting profession as a whole has become much more vibrant. The adoption of Accounting Information System (AIS) by the business entities necessitates the need of harmonisation of accounting theory and practice across the nation which would lead to uniformity in reporting of financial statements resulting in smoother flow of resources to them.

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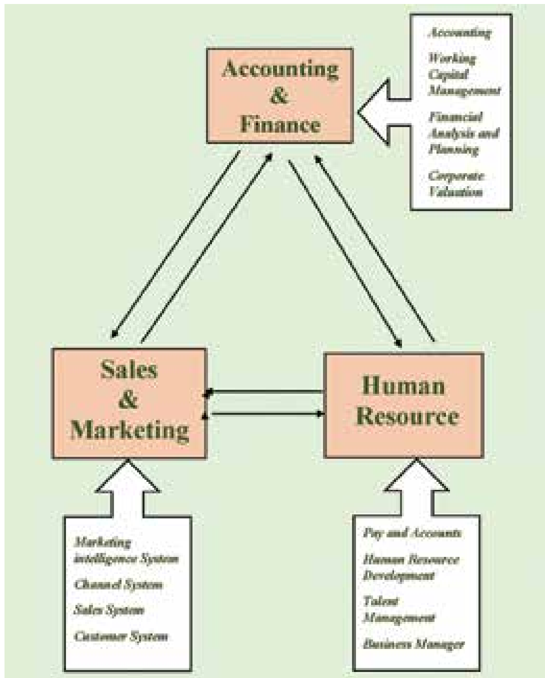
INTRODUCTION

Information technology has brought about a sea-change in the functioning of the business entities. From making them more competitive to providing them with endless opportunities, there lies the essence of this information revolution. Basically, adoption of technology is not the replacement of a classical set of knowledge in different fields of study relating to business; rather it is to bring in more accuracy and transparency in the system and also to ensure consumption of less time and cost. Business entities sub-divide the functions into accounting and finance, sales and marketing, and human resource etc. so as to provide necessary importance in specific and thus, they have separate information systems for each of the functions but at higher levels all are integrated. Accounting Information System (AIS) is the important sub-system of accounting and finance system that provides accurate transaction processing, responsive budgeting, forecasting, and faster and real-time reporting. Further, AIS has several modules to accomplish its objectives, namely General Ledger (GL) Module, Accounts Receivable (AR) Module, Accounts Payable (AP) Module Pay-Roll Module etc. With the advancement of computers, internet and other sophisticated electronic devices, the traditional manual approaches of work got replaced by technology driven systems with less-human interference.

DIAGRAM 1: INFORMATION SYSTEMS (IS_S) AND THEIR SUB-SYSTEMS



Source: Compiled by the author from the book

'Management Information Systems' by Jaiswal & Mital

INTERNET OF THINGS (IoT) AND INFORMATION SYSTEMS (ISs)

Internet of Things (IoT) refers to the ecosystem where the things, i.e. the devices, are connected with one another through a network to perform tasks with minimum human interference. Business entities are trying to bring in utmost accuracy and proficiency in their processes to ensure best value transmission to the society. In order to do that, they are choosing the best resources also for the smallest segment of their work. Thus, the activities are becoming more segregated and scattered day by day. Now to integrate them, the IoT is playing a pivotal role. In the environment where different business processes of a single entity are located across different continents even, the need of technology becomes inevitable. Therefore, the modern application of information systems to execute various business activities can never be successfully done without IoT.

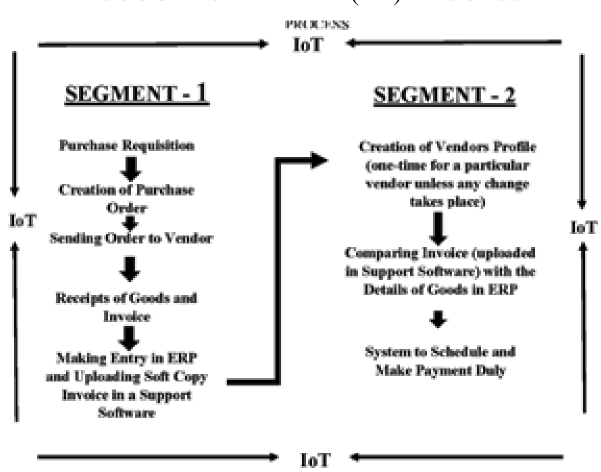
CONFLICT OF THEORY AND PRACTICE IN ACCOUNTING INFORMATION SYSTEM (AIS)

The operational level persons, associated with the AIS, sometimes find it difficult to relate theory with practice. It might sound like they are unable to match whatever they have studied in their academics with the job they are performing in their professional practice in AIS. Therefore, a search for truth becomes essential. After the invention of the double entry system of book-keeping, a theoretical framework had been gradually developed over the years considering the accounting concepts and conventions for making accounting entries and reporting acceptable to all thereby ensuring a transparent and fair disclosure of the organisation's position to the outer world. The information revolution became a boon to accounting by making it integrated with the process of execution of work. To be more specific, the traditional accounting was mere recording of transactions in the books of accounts but modern accounting combined with information technology has changed the dimension of work to a great extent. Now for example, when we talk about the accounts payable module in AIS we do not mean mere recording of transactions, but the whole set of work, starting from the receipt of goods at the store to making of final payment to the vendor at the right time are all integrated in the system. Thus, the recording of transactions in the books of accounts combined with all the related works now can be executed with the help of technology which makes it inevitable for the business entities to adopt AIS. Now, to sum it up, it may be stated that there is no conflict between theory and practice, rather it should not be. But what has happened is the integration of the whole set of work to bring automation in the process of execution, which earlier were separated from one another and accounting used to be done at the end, unlike today, when all the works can be simultaneously executed.

ROLE OF IoT IN OFFSHORE OUTSOURCING OF AIS

With the advancement of technology, it has become easy, nowadays, to avail of the resources which are scattered across the globe. Developing countries are blessed with intellects at low cost which can easily be accessed by the business entities having origin, mainly, in the developed countries. It is found that successful large-scale business entities operate globally to use the best resources economically. Most of the time, they do not even keep the control of many ancillary works with themselves, rather they find the best enterprises, capable of handling such works better, to execute them on their behalf at a negotiable price. This process of outsourcing ensures all such entities to concentrate on their core competencies i.e. where they have reached near to utmost perfection. AIS is one of the sub-systems of IS for accounting and finance. In AIS, there are several modules such as the GL, AR, AP and PR etc. Now, business entities even outsource these modules separately to different enterprises which are found to have efficiencies. This depicts the level of perfection the entities seek to avail the benefit of core competencies so as to ensure perfect execution of the work. On the other hand, the enterprises which take the responsibilities of executing the ancillary works must have to compete with other enterprises and win the battle of getting the opportunity. With the help of a diagram, the functioning of an accounts payable (AP) process could be presented as follows:

DIAGRAM 2: INTERNET OF THINGS (IOT) AND ACCOUNTS PAYABLE (AP) PROCESS



Source: Prepared by the author

Accounts Payable is one of the ancillary tasks of any manufacturing or service rendering organisation where payments are to be made to the suppliers or the vendors at the right time. This requires a rigorous involvement of the management which, on the other hand, might dilute the very objective of the organisation. The focus of the organisation may be shifted from the core function. Outsourcing of such ancillary works allows the organisation to concentrate on its core work. In an AP process, the whole set of work is segmented broadly in two parts. One is executed at the place where the production unit is located and the other segment is executed in the place where the process is outsourced. Diagram-2 represents the flow of work to be performed in an AP process in two such segments. It is not to be denied that IoT plays an important role in the execution without which the entire process cannot function.

HAZARDS DURING TRANSITION OF OUTSOURCING A PROCESS

Whenever any of the business processes is outsourced to another enterprise, which earlier used to be operated or managed by the business entity itself, it becomes very critical as well as sensitive to stabilise the system. In case of offshore outsourcing, where the process is shifted from one country (generally from developed country) to another country (generally to developing country), there arises many hazards such as the following:

- Organisational cultural barriers, which arise due to structural differences between the entities. One of the critical tasks during the phase of transition is to eliminate such barriers. Both the entities must be careful with the managerial hierarchy of one another at the time of interaction.
- Locational barriers are also critical as they sometimes become difficult to solve issues remotely. To overcome the problem a regular visit to the production unit by the personnel of the enterprise where the process is outsourced becomes indispensable.
- Knowledge barriers arise due to the fact that every organisation is unique in its approach in executing a work. During the phase of transition, the persons are sent for '*On Job Training*' (OJT) to acquire the knowledge which blends with the approach of the enterprise, to which the work is outsourced, to give a shape to the process to ensure most proficient execution.
- At the initial stage, i.e. during the transitional phase, constant care and support by the existing employees become essential which can be reduced gradually as the process moves towards stabilisation over time.

PROS AND CONS OF OUTSOURCING A PROCESS

The business process outsourcing (BPO), enabled by information revolution, has certain pros and cons that the business entities are to deal with. In terms of equality of access to resources which are scattered across the globe, there is no other option for the business entities but to outsource.

The following are the advantages:

- The company outsourcing its activities can concentrate more on the core or the main activity in which it has competence.
- The ancillary activities are handed over to the organisations having utmost proficiency that would ultimately improve the organisation as a whole.
- The countries to which the works are outsourced are providers of low-cost human resource and therefore the cost of production reduces to a great extent, which, in turn, enables the organisation to make the products available at low price to the society.
- Outsourcing helps in mobilisation of resources.
- Technological development can be transmitted worldwide with the advancement of outsourcing.

Following are the disadvantages:

- It increases the dependency of the business entity to a great extent.
- Data privacy may be compromised, which may even result in losing competency in the market.
- Overall structure of the entity may become complicated.
- The business entity loses control over its stakeholders as direct interaction becomes almost impossible once the work is outsourced. For example, in an AP process the organisation may lose direct contact with its vendors.

CONCLUSION

Due to rapid changes in technology, the accounting profession is facing a tremendous challenge and at the same time, plenty of opportunities are being thrown open. Information revolution combined with traditional knowledge of accounting has delivered a comprehensive system that takes care of the execution of work as well as its accounting simultaneously. The IoT is so self-activating that it does not even require manual interventions to record the transactions in the books as well as their reporting in the financial statements. The challenges lie in the fact that automation is reducing the requirement of skilled human resources to a great extent.

The IoT is so self-activating that it does not even require manual interventions to record the transactions in the books as well as their reporting in the financial statements

The systems are so sharp that the tasks can be performed by semi-skilled persons who have very little knowledge of accounting. Enterprises, which have taken the responsibilities of business processes of any large-scale business entity, require very few high-skilled human resources to develop and supervise the system and require plenty of semi-skilled human resources to execute the work. Thus, automation is bringing the glory of the profession to the threshold of danger. On the other hand, opportunities lie in the fact that accounting is becoming more accurate and transparent in reality. The availability of semi-skilled human resources in the developing country is providing plenty of job opportunities which in turn ensure equality in the distribution of resources globally. Another important development of the profession which is mainly triggered by the IoT or automation is the need for harmonisation of accounting theory and practice across the nations which would lead to uniformity in reporting of financial statements. The uniformity would, in turn, attract more investors and thus the flow of resources to the business entities would be smoother.

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EXTENDED PRODUCER RESPONSIBILITY – A TOOL TO STRENGTHEN ESG REPORTING IN INDIA

Abstract

Extended Producer Responsibility (EPR) creates a responsibility on producers to manage the waste they generate, which can aid in achieving the ESG goals in a seamless manner. This article looks at the characteristics and outcomes of EPR and tries to link them to the nine principles of SEBI's Business Responsibility and Sustainability Report framework in India. It finds that Principles 2 and 6 of BRSR have a strong link with the EPR outcomes while Principles 1,3,5 and 8 are moderately linked. Thus, EPR guidelines can help to improve ESG reporting, address stakeholder concerns and lead to business transformation.

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INTRODUCTION

The conventional philosophy of businesses focused primarily on profit maximization. Environmental, Social and Governance (ESG) practices carried out by firms form a new accountability measure that reflects maximizing shareholder value in the long run by stressing on attaining organizational commitment towards non-financial goals. One of the important ways of attaining ESG goals in contemporary times by the companies is through the Extended Producer Responsibility (EPR) framework. OECD has defined EPR thus: "*Extended Producer Responsibility (EPR) is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products*".

The overall environmental impact of products could be reduced by shifting the responsibility on the producer for the output, the production process and post-usage activities such as collecting, recycling, and final disposal of the product (Lindhqvist 1992). In other words, the responsibility of the producer extends to the complete life cycle of the product.

EPR IMPLEMENTATION IN INDIA

EPR policy draws from the 'Polluter-pays' principle by making the producers responsible, both financially and otherwise, for managing the waste generated. Firstly, this reduces the administrative and financial burden on local administrative bodies of managing solid waste. Secondly, it incentivizes producers to invent and modify products to make them more recyclable, reusable, economical and environment friendly. They would need to design products keeping in mind that they would also have to ensure their proper disposal. This would force them to select appropriate material for the product and follow a suitable production process which would make the collection and disposal easier for them. Thus, an apparent 'end-of-pipe' mitigation step (handling the pollution when it arises) can potentially translate into a 'beginning-of-pipe' solution (stopping the pollution from happening) which is preferable. The problem in managing products at the end of their life is commonly seen in industries such as packaging, paints, batteries, pharmaceuticals, vehicles and electronics, where the post-usage waste is either environmentally harmful to dispose, or clearly toxic in nature.

EPR can be implemented using instrument categories such as command and control, market based and informative, the mix of which can change depending on the context. OECD has suggested the following broad heads for classification of these instruments:

TABLE 1: INSTRUMENTS TO IMPLEMENT EPR

Sl. No.	Instruments	Description
1.	Product take-back requirements	• Producers or sellers are responsible to manage post-usage phase. • Can be achieved by setting collecting or recycling targets. • Can also be done by incentivizing consumers to return used products to a specified place.
2.	Economic and market based instruments	• Deposit refund- where buyer pays deposit at the time of purchase, which is refunded partly or in full when the product is returned. • Advance disposal fees- fees levied to cover estimated cost of collection and treatment, collected at time of purchase • Material taxes- taxes levied on usage of virgin toxic material, to encourage usage of recycled or secondary material • Upstream combination tax/ subsidy (UCTS)- taxes levied on producers which are then utilized to subsidize waste management. Encourages producers to streamline product input and design.
3.	Regulation and performance standards	• A mandatory or voluntary standard relating to minimum recycled content in the product that would encourage producers to take back their old products to recycle them.
4.	Information based instruments	• Focus on creating and increasing public awareness. Includes providing information about the product and raw material on the labels, responsibility of the producer, segregation of waste, and providing recycling related information

(Source: OECD 2016)

LEGAL FRAMEWORK OF EPR AND ESG IN INDIA

The enactment of provisions relating to corporate social responsibility (CSR) in the Companies Act 2013 coupled with Business Responsibility Reporting norms formulated by the SEBI marked the inception of a full-fledged legislative framework of sustainability law in India. SEBI has brought out a mandate for the top 1000 listed entities in the form of Business Responsibility and Sustainability Report (BRSR) directed towards ESG disclosure to be applicable from Financial Year 2021-22. India is the first country to bring about this mandatory requirement as it is believed that countries implementing rule-based norms tend to have better sustainability performance.

The guidelines for EPR on plastic packaging under the Plastic Waste Management Rules, 2016 were notified by the Ministry of Environment, Forest, and Climate Change of India in February 2022, effective from July 2022. These guidelines are aimed at creating a framework to increase the reuse and recycling of waste from plastic packaging, encourage emergence of options to plastic and create a push towards sustainable plastic packaging (MoEFCC 2022). Some salient features of these guidelines are:

- Encourage reusing recycled plastic as packaging material and decrease the use of virgin material.
- Businesses need to recycle a prescribed minimum level of plastic packaging waste collected.
- Sale and purchase of surplus EPR certificates are allowed, thus creating an economic incentive for plastic waste management.
- Implementing EPR through online means that allow for tracking and monitoring of activities, reducing corporate obligations of registration and filing returns. However, verification and audits would be conducted.
- Congruent with the polluter pays principle, producers pay a levy for not fulfilling EPR targets. These funds would be deployed for collecting, recycling, and finally disposing the waste in a safe manner.
- Producers have the option to implement schemes such as deposit refunds or buy-back to help segregate the waste.

Many of these guidelines follow the overall pattern of EPR as discussed in the preceding paragraphs. These guidelines could also boost the plastic waste management industry by encouraging formalization and further growth. Guidelines on similar lines have been issued for e-waste management in March 2022.

EPR AS A MEANS OF ATTAINING ESG

The concept of EPR focuses on the producers' responsibility towards environment, society, and internal stakeholders. As ESG is also associated with these three dimensions, one can attempt to draw a link between the two concepts. EPR policy outcomes could be sorted under the ESG parameters as under:

TABLE 2: LINKAGES BETWEEN EPR AND ESG

Environmental	Social	Governance
• Encourages environmentally-safe final collection and treatment of waste • Helps increase reuse and recycling of products • Incentivizes environment friendly designing • Contributes to transition towards a circular economy	• By applying polluter-pays principle, greater social responsibility placed on producers • Reduces potential health risks from mismanagement of hazardous and non-hazardous waste.	• The top management team can strengthen positive compliance and reporting by following EPR guidelines. • Accountability to shareholders and firm value improves as increase in usage of recycled material reduces costs. • Increase in job creation through increase in people engaged in waste management.

(Watkins and Gionfra 2020)

The different EPR parameters can relate to the current SEBI(BRSR) reporting framework to obtain a holistic picture of interlinkages between them. The aim is to apply the concept of EPR for attaining the BRSR principles in a seamless, convenient, and well-designed manner.

The following table shows the linkages between BRSR principles (Section C) and potential EPR outcomes:

TABLE 3: BRSR PRINCIPLES AND EPR OUTCOMES

BRSR Principle no.	BRSR principle heading	Extent of linkages with EPR	Indicators with a link to EPR	How EPR can help achieve this principle
1	Businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent and accountable.	Moderate	• Training and awareness programmes in connection with any of the principles.	In the quest for innovation of sustainable product input, design and end of life management, trainings would be required for employees at almost all the levels and for partners in the entire value chain to internalize the concept of EPR and improve sustainability.
2	Businesses should provide goods and services in a manner that is sustainable and safe	High	• R&D investment to improve environmental and social impacts • Sustainable sourcing details • Collection of products for reuse, recycle and end of life disposal • EPR waste collection plan submitted to Pollution Control Board • Life Cycle Assessment of products • Social or environmental risks • Recycled or reused material in process • Management of reclaimed products • Reclaimed products as percentage of sales	This principle is strongly linked with EPR policies and guidelines. Some of the outcomes of strict EPR policies could result in environment friendly R&D, focus on sustainable sourcing, recycling, processes and end of life management, this principle can become a reporting pillar for EPR mandated industries.
3	Businesses should respect and promote the well-being of all employees, including those in their value chains	Moderate	• Action taken for well-being of employees and workers • Details of partners in value-chain • Health and safety practices, working condition improvement	Positive improvement in the firm's manufacturing processes can lead to improvement in working conditions of its employees. Reclaiming of waste material is sometimes outsourced to waste collection and management firms. These firms usually deal with the unorganized sector to source the material (Gupt and Sahay 2019). The EPR mandated firm can impress upon its partner the need for formalizing well-being practices and improving working conditions for its employees.
4	Businesses should respect the interests of and be responsive to all its stakeholders	Low	• Identifying critical stakeholder groups • Addressing concerns of marginalized or vulnerable stakeholder groups	As mentioned above, the waste management workforce sometimes consist of marginalized and vulnerable sections of society. By formalizing the employment of these vulnerable groups to assist in the EPR process, businesses can benefit the entire stakeholder group.
5	Businesses should respect and promote human rights	Moderate	• Minimum wages to employees. • Details of child labour, women empowerment, etc.	This principle can be generally used as a motivation towards ensuring that minimum wages are given to the people involved in the EPR channel & the laws relating to child labour, women empowerment etc. are strictly adhered to. This principle is important since earlier, the workforce was unorganized, child labour was common and there were no fixed minimum wages.

6	Businesses should respect and make efforts to protect and restore the environment	High	• Total energy consumption and intensity, water usage, GHG emissions, air emissions, waste management methods, hazardous & toxic chemicals • Adhering to environmental law and regulations • Environmental impact assessment	This principle has a strong connection with the EPR policy as it focusses on obtaining environmental sustainability by reducing carbon emissions, energy consumption etc. These guidelines can be embedded in every stage of the EPR process to create a much larger impact on the society.
7	Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent	Low	• Linkages with trade and commerce bodies	EPR laws and guidelines can help create a link between the regular industries and waste collection and management industries. This would lead to further formalization of the waste management industry which could then use platforms such as trade and industry bodies to reach out to other industries.
8	Businesses should promote inclusive growth and equitable development	Moderate	• Amount of raw material sourced from suppliers • Sourcing material from marginalized or vulnerable groups	EPR guidelines incentivize producers to streamline the input by recycling and reusing polluting material. The recyclable material is sourced from vulnerable groups such as rag-pickers and waste collectors. Hence this principle correlates with some EPR outcomes.
9	Businesses should engage with and provide value to their consumers in a responsible manner	Low	• Information and awareness dissemination to consumers about using products in a responsible and safe manner • Product recalls due to safety issues	Due to the environment friendly outcomes of EPR guidelines with regard to product inputs and processes, it is beneficial for companies to inform consumers about these steps through advertising or packaging. Also, due to the focus on streamlined processes, the instances of product recall could reduce.

CONCLUDING REMARKS

The ESG reporting framework aims to acknowledge the interest of both direct and indirect stakeholders of a business by bringing about a more positive impact on them. The outcomes of EPR also focus on the producers' responsibility to these groups. Hence the linkage between the two concepts is logical and symbiotic as well. The more focused the action with regards to EPR, the better would be the ESG reporting and outcomes. From Table 3 above, it is evident that BRSR Principles 2 and 6, which refer to environmentally safe production processes and efforts to protect the environment, are strongly linked to EPR outcomes. This is also partly the result of the fact that EPR outwardly focusses on environmentally friendly practices and processes. However, the less evident but equally important focus of EPR is on social benefits and governance, which explains the moderate linkages with Principles 1,3,5 and 8 of the BRSR.

Mandated or voluntary EPR can be viewed as a burden if looked at from a narrow perspective of immediate benefits and results. However, from a longer and sustainable viewpoint, EPR can create a significant and positive impact on the firm's ESG reporting, which in turn can increase the long term returns and help attract green financing. In other words, compliance with EPR guidelines or laws can uncover a hidden opportunity for stakeholder growth and business transformation. MA

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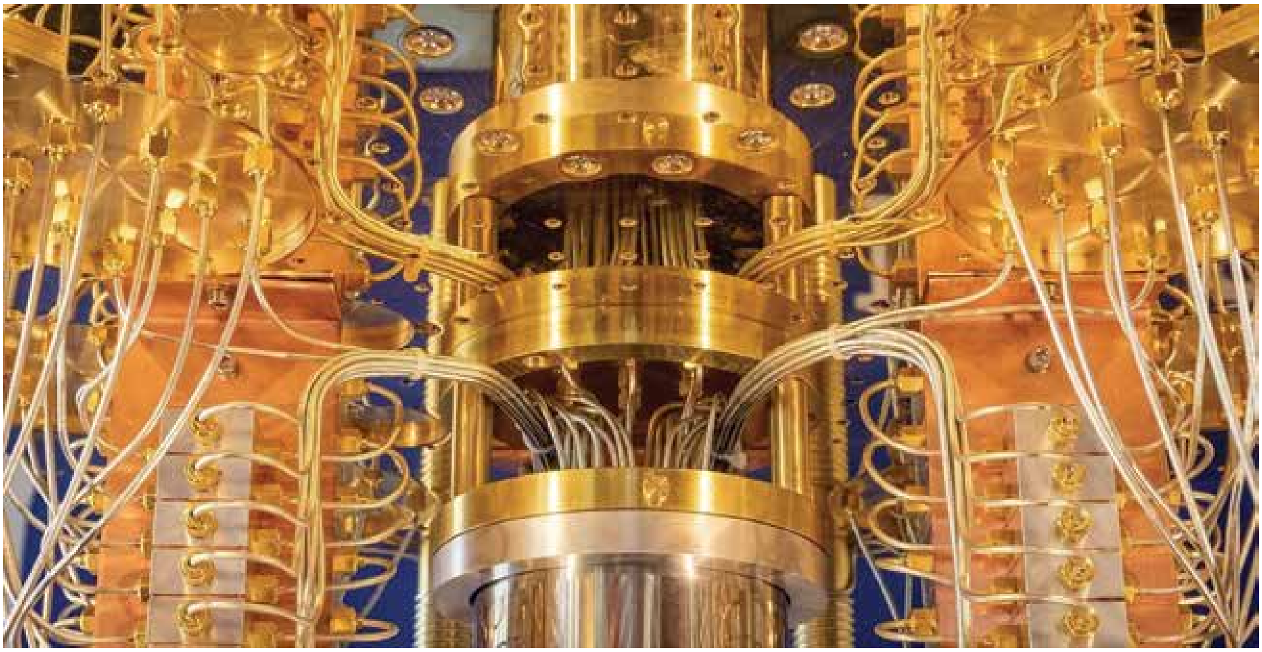
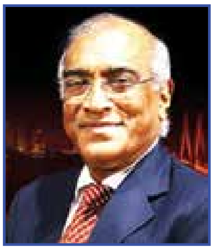


QUANTUM COMPUTING FOR DIGITAL TRANSFORMATION OF COMPLEX BUSINESS OPERATIONS



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Introduction

Exploration, innovation, speed, quality, scalability, agility, efficiency, and effectiveness always remained the collective mantra for human civilisation right from ancient days. Originally meeting needs for living life and fighting out existential threats used to be the driving force and motivator for discovering new sources of energy, food, shelter, and other consumables. Gradually, ease of living life and finding/crafting new goods for consumption, expansion, diversification, entertainment etc. evolved as the drivers for exploration and discovery. Mankind started becoming creative and thus explorations for new started yielding inventions and creative value creations. They also learnt the process of creative destruction to make room for new and 'innovention' for moving ahead through the path of making life better and affable.

This process never stopped as *charaiveti* or long endless journey towards self-realization evolved as the new addition to the mantra making life meaningful. People started moving through the accelerated process of civilisation. Here the word self-realisation is not being used from spiritual perspective but to mean self-actualisation. Two forces led the innovative mind for making the world a better place to live with ease and satisfaction. But satisfaction continued to remain unsatiable.

The eternal yearning for knowing why things happen in specific ways they happen and as being observed in nature was the first one. The foremost example of this is Newton's discovery of laws of gravity, the principles of visible light, and laws of motion. And the second one is self-actualisation by doing something that can remove sufferings of mankind. Plenty of inventions and discoveries in medical science are testimonies of these. The recent one is creation LED bulbs to minimis electricity and thus reduce carbon emission and also save cost.

Image Source: *https://www.cnet.com/tech/computing/ibm-new-53-qubit-quantum-computer-is-its-biggest-yet/*

Human civilisation witnessed several revolutions and hundreds of evolutions in the homogeneous fields of development. The process received accelerated pace right from the first industrial revolution commencing from 1780s for mechanisation powered by water and steam. The second revolution came in 1870s when mass production started with electrification of industries. But speed, control systems and qualitative perfection simultaneously with higher volumes still eluded mankind. Scientists continued with cerebral research to achieve more. The third industrial revolution, which started around 1970 was essentially driven by advanced computer science and technology. In this Industry 4.0 era computing technology has further advanced and moving towards commercialisation of Quantum Computing, which is the subject matter of this paper.

Objective

Quantum computers and quantum computing is an emerging field in the broad arena of information and communication technology with borrowed knowledge and application technique from the domain of quantum physics. It has started evolving at a slow but steady pace. Most of the developments so far are in the form of experimentation and pilot projects. Keeping these features in view the objective of this paper is dissemination of first-hand knowledge and information about quantum computing. Efforts would be made to briefly discuss the changes from classical computing systems to quantum computing systems without getting into technological matters. Efforts would be made to also share some outlines of the applications of quantum computing that are gradually revving up for benefits of industry trade and commerce.

Evolution of Computers and Computing Systems

The unsatiated desire of mankind to create and contribute something new for society was the crucible for the third revolution which started around 1970 with many more evolutions in both hardware and software for computing. Since then, computers and electronic control systems started being adopted for automation of industrial units and official desk top jobs. After this automation by computerisation became a global movement. This was further accelerated by advancements in communication technologies which made computers and handheld devices mobile. Research and development continued and presently quantum computing is on the verge of being adopted for commercial use by handling voluminous tasks.

In the article of October 2022 on Web3.0[1] under this column, the author has briefly written about the path through which the process of communication evolved from ancient days to present day Web3.0 for computerised communication. Similarly computing technology has also evolved from the first computer to present day quantum computing. The mechanically run analytical engine, or the popularly known difference engine, of Charles Babbage, on which he worked up to 1871, is regarded as the first ever computer of the world. Ideas for many subsequent complex electronic designs for modern computing machines are borrowed from it. However, the idea for programming of a modern computing machine has been borrowed from the Punch Cards[2] for making textile weaving patterns of Joseph-Marie Jacquard (1820), a French weaver and merchant.

Readers would be keen to know more about the history of evolution of computers, including laptop and palmtop computers like iPad and phones. The chronicle published by Computer History Museum[3] containing evolution of computers from 1937 to 2015 would be a good read for them. Balmer Lawrie group of Kolkata used to operate computers for writing financial books of accounts in which data used to be inserted through punched cards. The computing machines used to be almost as tall as the room ceiling. The author confirms these two having seen in 1980s during his employment period with that group.

Punch card used to be the system for data entry in many organisations before data punching system was adopted using electronic devices to generate off-line inputs for computerised processing of data. Later tape drives came for storing both punched and processed data. Experimentation for directly providing inputs to computers from a keyboard started experimented from around 1951at MIT but perhaps was put to successful commercial use quite later.

Genesis of Quantum Computing

Oxford Dictionary defines the word 'quantum' as "*a discreet quantity of energy proportional in magnitude to the frequency of the radiation it represents*" and 'computing' as "*the use or operation of computers.*" The former definition was borrowed from scientific domain. In common parlance if these two words are combined Quantum Computing (QC) can simply be defined as that system which uses the 'Quantum Theory' the original knowledge for which belongs to the domain of Physics as a subject. Therefore, QC is a product that emerged from combination of multiple knowledge dawn from the domains of Physics, Mathematics and Computer Science.

Quantum mechanics was developed in various stages during years between 1900 to 1925. However, this paradigm shift in computing technology, inspired by quantum theory, was first ideated in 1980 by Richard Feynman, considered to be the father of quantum computing. He was very ably supported by Yuri Ivanovich Manin, a Russian mathematician who could integrate theoretical physics with mathematical logic. Paul Anthony Benioff, an American physicist also contributed through his cerebral research on quantum information theory.

Classical computers generally

perform using the principles of Boolean Algebra. Computer scientists explain that classical computers work with three or seven mode logic gate principle. Readers are aware that using this principle such computers, including laptops and smart phones, process data in exclusive binary state at any time consisting of 0 meaning off/false or 1 on/true. For this each computer has a processing circuit with large number of transistors and capacitors. The whole system has limitations of processing speed and quickly switching from one state to the other for performing functions dictated by the users, albeit that speed is also overwhelming.

The fundamental unit of remembrance or memory in a Quantum Computer is a 'Quantum Bit' or a 'Qubit'. A quantum bit is a basic unit of information which is used for performing multifaceted quantum algorithms. It is created from a quantum system like an electron or photon. "*The foundational core of quantum computing is to store information in quantum states of matter and to use quantum gate operations to compute on that information, by harnessing and learning to "program" quantum interference*".[4] The findings from a random reading by the author reveal that while *" ..... a classical computer needs eight bits to represent any number from 0 to 255, a quantum computer would be able to represent every number tween 0 to 255 at the same time."* However, computer scientists can confirm this claim as the objective of this paper is not to deal with technicalities of QC.

Quantum Computers - Ideation and Developments

It took quite a lot of time since ideation by Richard Feynman for an actual quantum computer to see the light of day. Tireless and intensive research efforts of scientists in Universities of Berkley, MIT, Oxford, Stanford, etc., as well as IBM meet with success in developing a few 2 Qubit Quantum Computer. The journey continued to be a bit slow. In 2007 came the first 28 Qubit computer for field application from the stable of a startup called D-Wave of Canada.

Source: https://thequantuminsider.com/2020/03/31/d-wave-offers-free-quantum-cloud-access-for-covid-19-projects/

Their efforts continued to further increase the processing speed. D-Wave as a startup was magnanimous enough to provide access to their cloud computing system, powered by QC, for all project work that were performed for Covid-19 Pandemic. Scientists and research look for the services of a supercomputer, being a computer with high level performance as compared to general ones, when they work with voluminous data for complex calculations with many variables. At times supercomputers also fail to serve their purpose the way they want. Quantum Computers (QCs) are designed to serve such requirements for computing at gigantic scale with lightning speed because those can function faster than a classical computer by a hundred to thousand times. The user's device of a QC system is about the present size of a computer, but the main processing unit is quite large.

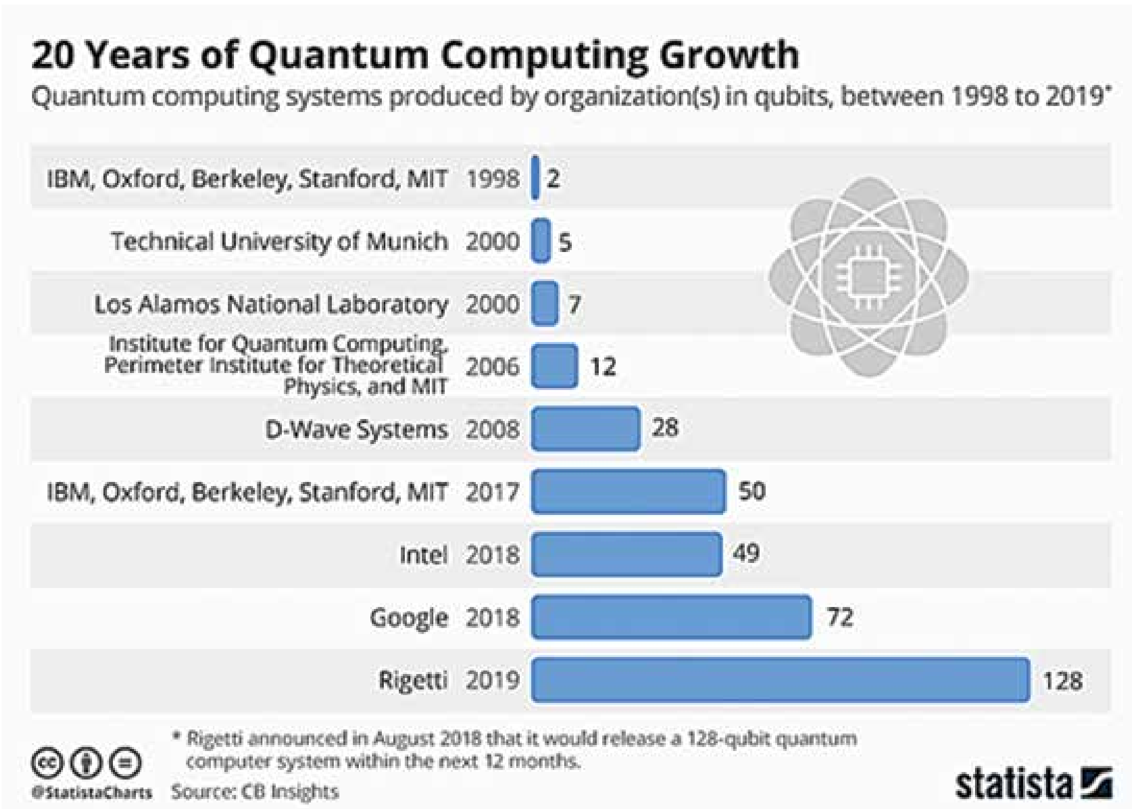
According to IBM[5] *"Quantum computers are elegant machines, smaller and requiring less energy than supercomputers. An IBM Quantum processor is a wafer not much bigger than the one found in a laptop. And a quantum hardware system is about the size of a car, made up mostly of cooling systems to keep the superconducting processor at its ultra-cold operational temperature. ..... Our quantum processors need to be very cold – about a hundredth of a degree above absolute zero. To achieve this, we use super-cooled super fluids to create superconductors*."

QCs are very powerful but very difficult to build as can be observed from the time it took to come to a reasonable scale of applications since 1980s when it was ideated. Quantum computing received quantum leap when digital giants started working for commercialisation of QCs. Incidentally global players like IBM, InonQ, Google and Rigetti, allows people to access their QCs for performing research work. IBM has also started selling QCs. Nitin Dahad, the European correspondent of EE Times, [6] reported in March 2020 that "*An IBM Q System One quantum computer will be installed in an IBM computer center near Stuttgart in early 2021," The said quantum computer was scheduled to be operational from early 2021. The following is a picture of the main processing system of that quantum computer.*

Source: https://www.eetimes.eu/first-ibm-quantum-computer-to-be-installed-in-europe-in-early-2021/

IBM has entered into a collaboration agreement for this with Fraunhofer-Gesellschaft of Germany Their objective is to provide companies and dedicated research organisations in the geographical region of European Union access to the powerful technology of QC. Those organisations are expected to conduct research on probable application cases and develop multidimensional strategies for and with quantum computing in complete compliance with European laws and GDPR.

QCs have still not been commercialised to such an extent that common people can use it. Hence the number of units built so far is also not very large. The following graphic of the globally renowned statistical organisation Statista provides an account of QCs produced by global giants during a period of 20 years from 1998 to 2019. It accounts for about 353 QCs by 8 groups of organisations including those who collaborated with research laboratories of various Universities.



Source: https://www.weforum.org/agenda/2019/10/quantum-computers-next-frontier-classical-google-ibm-nasa-supremacy/ and https://www.statista.com/chart/17896/quantum-computing-developments/

However, whether the course for commercialisation of QCs would take in foreseeable future is still not clear. This can be observed from the conclusion of Advait Deshpande in his research paper of October 2022[7]. He has concluded that, *"Perceived ROI in quantum computing and its potential to disrupt the current classical digital-computing landscape has intensified competition amongst the so-called big tech companies and selected high-performing start-ups to deliver a functional quantum computer. This makes it challenging to realistically assess available quantum-computing capabilities and to distinguish the hype from market realities."*

Applications of Quantum Computing

Readers by now must have understood that QCs are gargantuanly powerful and can process data using complex algorithms at lightning speed. The authors research collectively reveals that its phenomenal power would prove to be a game changer for equally giant digital players in creating applications for digital transformation and solving problems for business in which decision-making needs prior analyses of hugely huge data with large number of variables and complex business issues. This will also reduce business risks and uncertainties in functional management by more accurate predictive analysis drawing lessons and patterns from the past using enormous volume of data.

The following can be possible broad categories of applications in BFSI sector for which the incredible power of QC can be used. All these would create enormous impacts at the marketplace and enhance profit and profitability of business entities and other users:

- High frequency trading at stock exchanges for executing quantitative buy-sell strategies simultaneously with controlling and monitoring of risks, and portfolio optimisation,
- Quick detection of indicators of fraud to facilitate proactive management of fraud risks,
- Clustering of ostensibly disparate sets of assets for identifying behavioural patterns in respect of performance of those assets, customers' sentiment with the objective profit optimisation and risk aversion,
- Development of complex quantum algorithms for improved efficiency in cases of:
  - Insured risk management and premium pricing in varying geographic and demographic conditions and settlement of claims,
  - Lending decisions with varying degrees of credit rating, collaterals, and liquidity profiles of borrowers,
- Management of information security systems by quantum-proofing and applications of advanced next generation algorithms for cryptography to safeguard of confidential data of customers.

According to the author one of the possible business use cases could be route-traffic optimisation for shipping and marine freight container service providers who must maximise, optimise, or minimise, as appropriate, the following:

- Optimise utilisation of hundreds of ships and thousands of marine freight containers ferrying over thousands of ports across the world,
- Minimisation of customers' expenditure for containers and marine freight by optimisation of timing for positioning of ships and containers at various global seaports and dry-ports in a manner that optimises distance for carriage,
- Minimise unproductive movements of empty containers and partly loaded ships,
- Minimise waiting time for customers to ship out their merchandise from ports of loading,
- Optimise, based on availability of berths and unloading/ loading facilities at ports, time taken for unloading of cargo at the port of destination and again reloading for carriage of next customers' cargo to the next destination, etc.

Readers would be benefitted by referring to Cem Dilmegani's updated research paper[8]. He has quoted top twenty use cases and applications of quantum computing. He has also provided details of applications and names of organisations which have already started using quantum computing facility or at various stages of pilot research before commercial applications.

According to a research report published by Mckinsey[9] in December 2021 the global business ecosystem has started showing growing symptoms for applications of QCs for commercial purposes. The report contains by way of exhibits exhaustive information covering:

- Startups working on QC projects and funding for those with spike to USD 1.7 Bln. between 2020-21
- Maturity of hardware and software for QC projects for various types of industries,
- Industry use cases and predicted values at stake between 2035-2030, etc.

In this paper they have quoted the report published by Statista regarding country-wise commitment of funding from public sources for research in the emerging field of quantum computing. It reveals that top five commitments (Nos, are in USD Billion) are from China - 15, European Union - 7.2, USA - 1.3 and India and Japan - 1.00 each. They are followed by Russia - 0.7, Canada - 0.6 and Israel - 0.5. All these committed numbers provide silver lining of assurances for bright future of digital transformation with quantum computing.

Information from India on QC

The newspaper 'Mint' published from Mumbai has reported on November 26, 2022, that Tata Consultancy Services (TCS)[10] has created a laboratory for quantum computing on Amazon Web Services. Their corporate customers would be able to use this virtual R&D environment powered by Amazon Bracket. According to the report TCS has said that*"..... it will combine its "deep domain knowledge" and tech expertise with the power of qubits or quantum bits to help customers build solutions for risk evaluation, secure communication ecosystems, and predict customer behavior*".

In the report of Statista, as mentioned above, India stands as one of the five countries where public funding has been committed to the extent of USD 1 Bln. for conducting research and development activities related to hardware and software for quantum computing. According to a report published in IndiaAI[11] the following is an illustrative list of Indian institutions which have commenced research and development activities in larger domain of quantum computers and computing:

- Initiatives on Quantum Technologies by Indian Institute of Science (IQT@IISC),
- IIT, Jodhpur has set up a Quantum Information and Computation Group,
- IIT Madras has set up a Centre for Quantum Information Communication and Computing, and
- Tata Institute of Fundamental Research has set up a Quantum Measurement and Control Laboratory.

One can, therefore, hope for India emerging as one of the top players in this emerging field of quantum computing and derive benefits for its circa 140 Bln, citizens.

Conclusion

Readers by now must have appreciated that quantum computing with quantum computers is continuing to be an emerging field for both hardware and software. Implementation of 5G in telecommunication arena would work as an enabler and booster for this field. The author would consider that this paper has reasonably served its objective if readers can get first-hand knowledge and information about quantum computing and its applications as contemplated so far. The author would like to write more about this field as the course of research, development and applications for digital transformation with quantum computing continues. MA

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EFFECTIVENESS OF INDIVIDUAL INSOLVENCY RESOLUTION PROCESS FOR CORPORATE DEBTORS

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Abstract

Paradoxically, in India, we find many affluent promoters with sick companies. During the last five years, the Public Sector Banks (PSBs) in India have prudentially written off non-performing assets to the tune of ₹ 7,27,680 crores which is more than the capital infused by the Government of India in them. The PSBs have a right to recover this huge sum both from the corporates and the promoter-guarantors. The provisions of the Insolvency and Bankruptcy Code (IBC), 2016 relating to individual insolvency resolution process as to the personal guarantors (PGs) to the corporate debtors (CDs) were made effective from 1st December 2019, but have yielded little results even after three years of their implementation. Out of 1,235 applications filed with NCLTs, only 90 cases have been admitted as of 30th June 2022. This Study attempts to find out the causative factors for the delays in PG-to-CD resolution and suggest remedial measures for its smooth progress and maximisation of recovery.

INTRODUCTION

The Insolvency and Bankruptcy Code (IBC), 2016 is applicable to companies, limited liability partnerships, partnerships proprietorship firms and individuals as to their insolvency, liquidation, voluntary liquidation, or bankruptcy depending upon the case. Part III of the Code describes the resolution and bankruptcy of individuals and firms. It classifies individuals into three categories, namely, (i) personal guarantors (PGs) to corporate debtors (CDs), (ii) partnership firms & proprietorship firms, and (iii) other individuals. The Government of India has notified the commencement of provisions relating to insolvency and bankruptcy processes for PGs to CDs with effect from 1st December 2019. For PGs to CDs, the minimum threshold of default is Rupees One thousand only and the Adjudicating Authority (AA) includes National Company Law Tribunal (NCLT) or Debt Recovery Tribunal (DRT) in different scenarios.

Terminologies

"Personal guarantor" means an individual who is a surety in a contract of guarantee to a corporate debtor[1]. A "contract of guarantee" is a contract to perform the promise or discharge the liability of a third person in case of his default[2]. The liability of the guarantor is co-extensive with that of the principal debtor[3]. The guarantee furnished by a person to the corporate debtor can be invoked even prior to resorting to the corporate debtor.

"Corporate debtor" means a corporate person for whom the guarantor has given a personal guarantee[4]. "Insolvency" is a situation where the liabilities of a person exceed their assets and he/she is unable to pay debt obligations. "Bankruptcy" occurs when a court recognises insolvency which is beyond resolution. A "bankrupt" means that a debtor has been adjudged bankrupt by an AA by passing bankruptcy order[5].

Process Flow for Individual Insolvency & Bankruptcy for PG to CD:

The Code allows a maximum period of 180 days under the Individual Insolvency Resolution Process(IIRP). A typical flowchart for the insolvency and bankruptcy process is as under:

Steps in IIRP for PG to CD		Steps in IIRP for PG to CD	
Step	***Activity***	***Step***	***Activity***
1	Mandatory demand notice by creditor.	1	Application filed by debtor or creditor.
2	Application by creditor to initiate Insolvency Resolution.	2	Interim moratorium.
3	Interim moratorium and Appointment of Resolution Professional(RP).	3	Appointment of Bankruptcy Trustee (BT).
4	Submission of report by RP	4	Bankruptcy order.
5	Admission/ rejection of application by Adjudicating Authority(AA) *(If rejected, the Creditor is entitled to file for Bankruptcy Order).*	5	Submission of financial position of the bankrupt (Statement of Affairs(SoA) of the guarantor).
6	Moratorium on legal action.	6	Public notice inviting claims by the Bankruptcy Trustee.
7	Public notice inviting claims.	7	Preparation of claims by the Bankruptcy Trustee.
8	Verification & Preparation of List of Creditors.	8	Meeting of the Creditors & Voting.
9	Preparation of repayment plan & submission of report by RP.	9	Administration & distribution of the estate of the bankrupt.
10	Meeting of Creditors & Approval/ Rejection of Plan *(If rejected, both the debtor/creditor are entitled to file an application for bankruptcy).*	10	Discharge order.
11	Order by the AA.		
12	Completion of repayment plan.		
13	Discharge order.		

[1]. *Section 5(22), IBC,2016*
[2]. *Section 126,Indian Contract Act, 1872.*
[3]. *ibid*
[4]. *Section 3(c),IBBI Regulation on Insolvency Resolution Process for PG to CD*
[5]. *Section, 79(3)(a) Taake these as Footnote on page 2*

Disqualifications of the Bankrupt

The bankrupt shall be subject to various disqualifications from the bankruptcy commencement date(BCD) under section 140 of the Code, like being a trustee, election to a public office, and appointed as a public servant.

Restrictions on Bankrupt

Under the section 141 of the Code, from the BCD till the passing of discharge order, *inter alia*, a bankrupt shall be debarred from travelling overseas without the permission of AA, not to act as director of any company directly or indirectly and not to be elected to any public office, etc.

Scope for Recovery

The gross non-performing assets (GNPAs) of the public sector banks stood at ₹5,42,173 Crores as of March 31, 2022. The public sector banks(PSBs) have prudentially written off a whopping amount of **₹7,27,680 Crores** during the last five years (Table 1), which is more than the amount of capital infused by the GoI during that period.

TABLE 1: AMOUNT WRITTEN OFF BY THE PUBLIC SECTOR BANKS

FY	GNPA (In crore ₹)	NNPA (In crore ₹)	Amount Written Off (in crore ₹)	No. of Wilful Defaulters of SCBs
2017-18	8,95,600	4,54,472	1,28,231	NA
2018-19	7,39,541	2,85,122	1,83,562	2,207
2019-20	6,78,318	2,30,854	1,75,876	2,469
2020-21	6,16,615	1,96,452	1,31,894	2,840
2021-22	5,42,173	1,54,746	1,08,117	2,790
Total			**7,27,680**	

[*Sources:(i). GNPA & NNPA-Indian Banks Association; (ii). Write-Off & Wilful Defaulters-Reply dated 02/08/2022 of Ministry of Finance to the Parliament*]

Though macro-level figures aren't available as to the GNPAs and written off accounts backed by the PGs, it is a known fact that the banks invariably insist upon the PGs of the promoters or the third parties for their corporate exposures. In India it is observed that there are many affluent promoters with sick companies. The IBC now instils fear in the hearts of the promoter-guarantor on the loss of reputation being declared as insolvent/bankrupt in public. It may accelerate the recovery efforts of the lenders.

The Need for the Study

From December 1, 2019 the Rules and Regulations relating to insolvency and bankruptcy of the PG-to-CD were made effective. The number of applications filed as of June 2022 was 1,235 out of which 62 cases have been withdrawn/rejected/dismissed. The number of cases admitted by the NCLTs is merely 90. The details are given in Table 2.

TABLE 2: STATUS OF FILED APPLICATIONS FOR INSOLVENCY RESOLUTION PROCESS OF PG TO CD

Period	No. of Applications Filed	Debt Amount (Rs. in Crs)	No. of Applications		
			Withdrawn	Dismissed/ Rejected	Admitted
2019-20	22	3,306.53	0	0	0
2020-21	237	39,246.29	8	2	9
2021-22	853	62,730.32	14	16	24
April-Jun.2022	123	5,667.77	4	18	57
Total	**1,235**	**1,10,950.91**	**26**	**36**	**90**

[*Source: IBBI*]

Though time is the essence of the IBC process, there were no instances of any resolution even after the expiry of nearly three years. It calls for a study to examine the causes of delay, impediments to the resolution process, and likely solutions for timely resolution.

LITERATURE REVIEW

The literature on IIRP (PG-to-CD) in the Indian context is limited. A summary of the available literature is furnished in Table 3.

TABLE 3: REVIEW OF LITERATURE ON PERSONAL INSOLVENCY & BANKRUPTCY

Authors	Context	Findings
Renuka Sahane (2019)	The Way Forward for Personal Insolvency in the IBC	The paper argues for the necessity of personal insolvency law in India. Makes meaningful suggestions on the implementation of personal insolvency in the IBC,2016. Has examined the weaknesses of the legal processes in recoveries under the SARFAESI 2002, DRT, and NI Act,1881.
Adam Feibelman & Renuka Sahane (2020)	A Baseline Framework for designing a Personal Insolvency Regime under IBC	The paper identifies base line standardisation and designing of debtors' repayment plans with imperfect information veracity, for the personal insolvency resolution process. It focuses on five elements of repayment plans: income of the debtor, the excluded assets, duration of a repayment plan, treatment of secured claims, and discharge of unsecured debt.
Mohsin Rahim (2021)	Analysis of Supreme Court Case: *Lalit Kumar Jain vs. Union of India*	i. Creditor can claim the debt from both the corporate debtor and guarantor simultaneously until he is paid in full. ii. Proceedings can be initiated against the corporate debtor and guarantor simultaneously. iii. Liability of the guarantor is independent of the hair-cut given to the principal debtor. iv. Guarantor has no right of subrogation under the Code
Rajiv Mani (2020)	Mediation in Insolvency Matters	Globally, insolvency disputes have been resolved more by Alternative Dispute Redressal mechanisms than by adjudication. Examines the success of Mediation in foreign jurisdictions like the USA and Europe. Mediation increases the likelihood of a win-win scenario, not binding upon parties without their consent, preserves the normal relationship between parties, and avoids insolvency resolution costs. Mediation can lessen the burden of the overloaded judiciary.

RESEARCH OBJECTIVES

i. To examine the factors for the slow progress in PG-to-CD resolution mechanism under the Code.

ii. To explore the ways to improve the efficacy of the IIRP for recoveries in the impaired corporate credit portfolio of the lenders.

RESEARCH METHODOLOGY:

Due to its qualitative nature and limited availability of domain experts, a purposive sampling technique was employed for the study. The sample consisted of 90 professionals from the field of banking, law, and insolvency and bankruptcy. The number of respondents to the questionnaire were 55, out of which 69 per cent were senior bankers, 14.5 per cent were legal personnel and 16.5 per cent were insolvency professionals.

DATA ANALYSIS

Contributory Factors for Delays at Admission Stage

The delays are humongous in the admission of applications for resolutions under IIRP for corporate loans. The main reasons are furnished in Table 4.

TABLE 4: REASONS FOR DELAYS AT ADMISSION STAGE

Sr. No.	Reason	% of Respondents
1	Challenged by the PGs for admission of the case	61.8
2	Non-availability of relevant documents of PGs like deed of guarantee with revival letters, net-worth statements & credit opinion reports in most cases	54.5
3	Due to workload NCLTs give more time to CIRPs than to PGs to CDs cases	52.7
4	Arguing on Limitation Act on the validity of deed of guarantee	38.2

Reasons for Delays at Post-Admission Stage:

Post-admission of cases, delays occur due to a variety of reasons. The main reasons are furnished in Table 5.

TABLE 5: REASONS FOR DELAYS AT POST-ADMISSION STAGE

Sr. No.	Reason	% of Respondents
1	Inordinate delay in submission of the repayment plan and statement of affairs by the PG	74.5
2	No standardized format for repayment plan prescribed under the Regulations	45.5
3	Summoning of creditors of all classes for the meeting	32.7

Approval of Repayment Plan

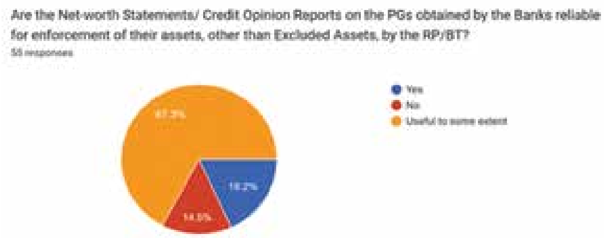
The approval of the repayment plan is the core issue in the PGs to CDs mechanism. But the main deterrence to approval of the repayment plan are as under (Table-6):

TABLE 6: REASONS FOR DELAYS IN APPROVAL OF T REPAYMENT PLAN

Sr. No.	Reason	% of Respondents
1	Non-availability of the information on the PGs' assets for enforcement	69.1
2	Steep haircut dissuades the bankers/ other creditors to approve the resolution	60.0

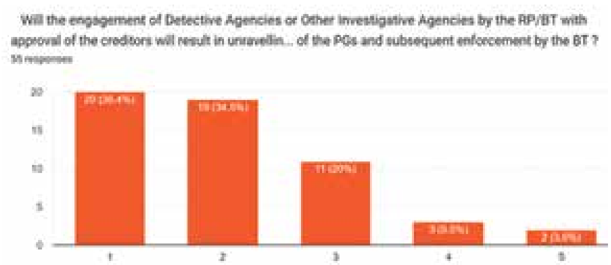
Reliability of Net-worth/ Credit Opinion Report

Financial creditors (FCs) while sanctioning loans to the CDs compile the net-worth statements of the PGs. But it is observed that mostly the details of the assets of the PGs are not recorded/updated properly other than the mortgaged properties for securing loans. This makes realising the assets of the PGs (other than the excluded assets) difficult for the RPs. 67 p[er cent of the respondents have opined that net-worth statements obtained by the FCs are somewhat useful.



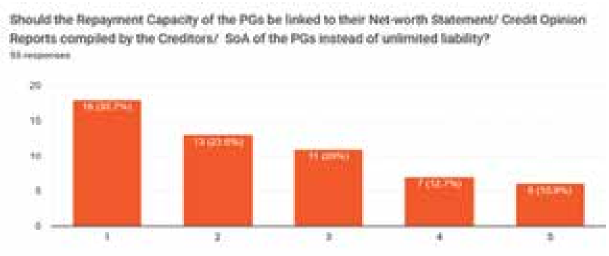
Engagement of Detective/Investigative Agencies

It is a fact that "In India, industries may go sick, but not the promoters". In many cases, alienation of securities in the names of the PGs occurs when the loans taken in the names of their companies go bad. Nor do they cooperate with the creditors/RPs for revealing their assets. 71 per cent of the respondents have opined that the engagement of detectives / other investigative agencies will help in unravelling the hidden assets of the PGs and subsequent enforcement by the BT. The responses are on a linear scale of 1-5 (1. Strongly Agree, 2. Agree, 3. Neither Agree/Disagree, 4. Disagree, 5. Strongly Disagree).



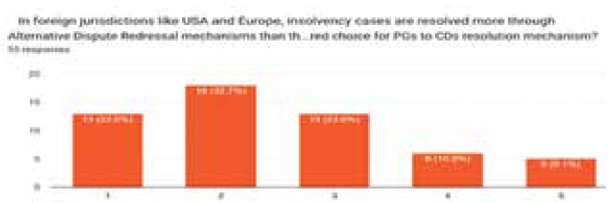
Linkage of Repayment Capacity of PGs with their Net-worth Statements

It is observed that the FCs demand unlimited sums from the PGs unmindful of their means to pay which bears no correlation with their repayment capacity as per their net-worth/ credit opinion reports held on record, or statement of affairs submitted at the time of resolution. 56 per cent of the respondents felt that the repayment plan should be realistic vis-à-vis net-worth/ SoA of the PGs. The responses are in the linear scale of 1-5 (1. Strongly Agree to 5. Strongly Disagree).



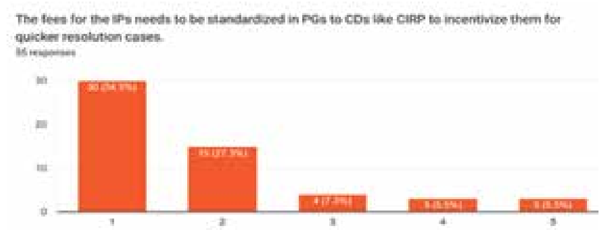
Role of Alternative Dispute Redressal Mechanism

In foreign jurisdictions like USA and Europe, insolvency cases are resolved more through alternative dispute redressal mechanisms like mediation than through adjudication. 56 per cent of the respondents felt that "Mediation" should be a preferred choice for PGs-to-CDs resolution mechanism instead of protracted IBC cases and looking at time value of money. The responses are on linear scale of 1-5 (1. Strongly Agree to 5. Strongly Disagree).



Incentivising the IPs with Standardised Fees

Recently, the fees of IPs as IRP/RP/Liquidator in CIRP cases have been standardised. But the same benefits have not been extended to the RPs/BTs in PG-to-CD resolution. 82 per cent of the respondents felt that fees for the IPs should be standardised in such cases as IPs are being measly paid by the creditors. This may strengthen and hasten the process. The responses are on a linear scale of 1-5 (1. Strongly Agree to 5. Strongly Disagree).



SUMMARY OF ANALYSIS OF THE FINDINGS

A summary of the findings of the study are as under:

i. The major bottleneck is the admission of cases due to immediate legal challenges by the PGs and lack of focus of NCLTs on PGs-to-CDs cases presumably due to pile-up of CIRP cases.

ii. In the post-admission stage, the PGs intentionally delay the submission of their repayment plans.

iii. Approval of the repayment plan gets delayed as it comes with a steep haircut and there is an opacity of information on the assets of the PGs for the lenders.

iv. It is evident that the net-worth statements compiled by the FCs are less reliable.

v. In case of large advances, where the claims are more than the net means of the PGs, there is a need for policy intervention on capping the amount of settlement.

vi. There is a pressing need to bring in alternative dispute resolution like mediation when the PG-to-CD cases kick in.

CONCLUSION AND RECOMMENDATIONS

i. Mediation: As of now, there is no provision for mediation under the Code. The Companies Act,2013, Commercial Courts Act, 2015, RERA,2016, Consumer Protection Act,2019, MSME Development Act,2016 and the Industrial Disputes Act,1947 provide for mediation and conciliation for resolving commercial disputes. Looking at the dismal progress of PGs-to-CDs cases in the NCLTs, mediation can help reduce the stress of the overburdened judiciary.

ii. Non-Cooperation of the PGs: In most cases the PGs are reluctant/avoid in declaring true position of their assets for enforcement by the RPs/BTs. In application stage, as such a prayer may be made by the RP to the NCLT with a direction to the PGs to disclose their true assets and not to alienate the same, as it is done under the section 19(3) of the RDBA(DRT) Act, 1993. Otherwise, section 19(2) of the Code may be invoked for necessary directions by the Adjudicating Authority against the non-cooperation of the PGs.

iii. Increasing NCLT Benches: Due to burgeoning number of PG-to-CD cases, there is an urgent need to increase NCLT Benches and bifurcation of works relating to CIRP and PIRP for timely resolutions.

iv. Net-worth Statements by Creditors: It is observed the banks are lackadaisical in compilation of the net-worth statements of the guarantors with supporting proofs. The same should be updated with due verifications every year. The net-worth statements may be corroborated through account aggregators.

v. Empanelment of Investigating Agencies: The IBBI has standardised the process for valuation through Registered Valuers platform. It is recommended for standardising the process for empanelment of detective/ investigative agencies by IBBI for unravelling the undeclared assets of the PGs. There is an ambiguity in the Code whether the RP can appoint such services to maximise the recovery. The Code should be certain and clear in this regard.

vi. Standardisation of the Format for Repayment Plan: It is observed that most of the PGs don't properly maintain the books of accounts. The

The guarantee furnished by a person to the corporate debtor can be invoked even prior to resorting to the corporate debtor

submission of repayment plan if standardised will go a long way in avoiding delays and hasten the resolution process.

vii. **Restricting Liability to Net-worth:** The liability of the PGs is open ended. Their liability may be crystallised taking into account their net means and repayment capacity.

viii. **Spreading the Consequences of Insolvency/ Bankruptcy:** A sustained public awareness campaign may be made on the consequences of insolvency/bankruptcy as detailed in the Paras 1.3 and 1.4 above under the Code, so that there will be voluntary resolution of PGs-to-CDs cases.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

The present study has focussed upon analysing the causative factors for delays in PG-to-CD resolution cases and suggest remedial measures to tone up the process. However, it offers further research on the following areas:

i. A comparative study may be made why success is forthcoming under the SARFAESI/DRT cases, but not in the personal insolvency resolution (PIRP) under the IBC?

ii. Structuring a repayment plan for the PIRP cases under the IBC. MA

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A CASE STUDY ON FINANCIAL INCLUSION AND POST-COVID LIVELIHOOD AMONG MIGRANT LABOURERS OF TITAGARH IN WEST BENGAL

Abstract

Even though migration plays a significant role in the economy in terms of developmental practices, their rugged livelihood was brought to light during Covid-19 crisis. Using primary survey among the inter-State and intra- State labourers of Titagarh in West Bengal, an attempt is made to examine the financial inclusion and post-Covid effect on their income, remittance and different aspects of their livelihood like free food grain, employment loss and child immunisation.

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I. INTRODUCTION

Migrant labour has always been an important constituent of the unorganized sector in the country which was severely affected by the Covid lockdown. Though the problem of migrant labourers had been in existence in India in the pre covid era also , it became the talk of the days during Covid-19 because of the severe adsverse effects of Covid lockdown.. The migrant workers spanned across many sectors comprise mainly of the daily wage earners. A large number of migrant labourers are unskilled and are engaged in high-risk jobs (*Deshingkar et al., 2008)* and yet very few are included in any type of social security scheme. Due to lockdown most of the labourers lost their jobs. Also, they were unable to return to their native place due to disruption of public transport and restriction in movement. Thus it forced many migrant workers to walk hundreds of kilometers on foot to reach their native villages.

In developing countries like India, workers in the unorganized sector deserve social protection that not only provides for their basic needs but also protects them from economic uncertainty. There are few social security measures available, especially for the migrant labourers, such as the Unorganized Workers Social Security Act, 2008 to address the risk management needs of the migrant worker and the *Swavalamvan* pension scheme (later changed as *Atal Pension Yojana*). However, migrant labourers require protective measures and security which are still lacking. The financial needs of migrant workers are not only limited to remittances but also to solve the problem of poverty and inequality. Yet the specific financial needs and risk management instruments for migrants and their households are not introduced by the employers or contractors or by the banking networks.

Migration has also been found to

be a strategy for household finance. The remitted money is generally used in meeting the day-to-day expenses, children's education, health-care and debt clearance. Due to the outbreak of Covid-19, domestic remittance fell by 80 per cent due to sudden loss of job and due reverse migration *(The Economic Times. 4th April 2020)*. The pandemic not only put migrant workers' lives in jeopardy but also resulted in unpredictably high incidences of malnutrition as a result of lost jobs and loss of pay.

In this paper, the effect of income and remittance during the Covid-19 crisis are studied which information could not be otherwise found. The study brought out the ground-line facts based on economic problems of the migrant labourers through primary data collection which somewhere lacked similar secondary data in the same region of West Bengal.

1.1 OBJECTIVES

i. To examine the level of financial inclusion among the different categories of migrant labourers in Titagarh, West Bengal

ii. To analyse the remittance behaviour among the migrant labourers with reference to traits like type of occupation, income, financial inclusion, family structure and education.

iii. To look into different aspects of livelihood like income, employment, Government assistance, vaccination, remittance, etc. in the aftermath of the first wave of Covid among the migrant labourers in Titagarh with reference to their places of origin.

II. LITERATURE REVIEW

A few studies could be identified with in the country and outside to see the impact of Covid-19 on the migrant labourers. *Sahni et al. (2020)* have discussed the social and economic impact on rural migrants. *Walter (2020)* analyzed the vulnerability of urban casual employees most of whom are migrants and got highlighted during Covid-19 as they were among the first to be shocked by the lockdown. *Khanna (2020)* studied the impact of migration of labour force due to the pandemic with reference to India and observed that millions of migrant labourers were living in fear of being left unemployed due to prolonged lockdown and subsequent recession. *SWAN (2020)* conducted a survey of 16,863 workers and found that migrant labourers were facing immense problems such as loss of wage and shortfall in savings at their workplace, non-availability of ration and cooked meals. *Guha et al. (2020)* investigated the effect of joblessness on income and remittances using analysis of covariance on Assamese inter-State migrant labourers. *Tu C. et al. (2019)* conducted an empirical research to know the effect of remittance inflows, financial inclusion and economic development, as well as to know whether inward remittances can aid in the establishment of a more inclusive financial system.

III. DATA AND METHODOLOGY

A quantitative research design is adopted and a survey was also carried out between February and April of 2021. The ground survey was conducted with the help of a structured questionnaire. A total of 80 migrant workers were enlisted for the survey. Stratified random sampling was applied in order to collect the data for the study as the sample was divided into four strata/groups, namely, inter-State inbound and outbound, and intra-State inbound and outbound. Post hoc test was run to investigate which categories differed significantly among themselves. Multiple regression analysis has been conducted on financial inclusion and remittance.

Financial inclusion is measured with the help of three predictor variables, namely, income, education and occupation, where,

Financial Inclusion = $\alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$,

where, α =Residual error, β_1X_1=Income, β_2X_2 =Occupation and β_3X_3=Education.

Remittance is measured with the help of four predictor variables, namely, income, education, occupation and financial inclusion.

Remittance= $\alpha_1 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$,

where, α_1 =Residual error, β_1X_1=Occupation, β_2X_2 =Education, β_3X_3=Income and β_4X_4= Financial inclusion.

IV. DATA ANALYSIS AND FINDINGS

4.1 Level of financial inclusion among the labourers

TABLE 4.1. MULTIPLE COMPARISONS USING FISHER'S LSD POST-HOC ANALYSIS

Multiple Comparisons						
Dependent Variable: Financial Inclusion						
LSD						
(I) Category Of Migrant Labourers	(J) Category Of Migrant Labourers	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Inter-State Inbound	Inter-State Outbound	-.350	.233	.137	-.81	.11
	Intra-State Inbound	-.700*	.233	.004	-1.16	-.24
	Intra-State Outbound	-.200	.233	.393	-.66	.26

Inter-State Outbound	Inter-State Inbound	.350	.233	.137	-.11	.81
	Intra-State Inbound	-.350	.233	.137	-.81	.11
	Intra-State Outbound	.150	.233	.521	-.31	.61
Intra-State Inbound	Inter-State Inbound	.700*	.233	.004	.24	1.16
	Inter-State Outbound	.350	.233	.137	-.11	.81
	Intra-State Outbound	.500*	.233	.035	.04	.96
Intra-State Outbound	Inter-State Inbound	.200	.233	.393	-.26	.66
	Inter-State Outbound	-.150	.233	.521	-.61	.31
	Intra-State Inbound	-.500*	.233	.035	-.96	-.04
* The mean difference is significant at the 0.05 level.						

The LSD post hoc analysis reveals that intra-State inbound workers (n=20, mean= 2.10, S.D.= 0.788) are significantly more financially included than inter-State inbound workers (n=20, mean=1.40, S.D.=0.821). There is a significant difference between the intra-State inbound and intra-State outbound workers, where intra-State inbound (n=20, mean=2.10, S.D.=0.788) are much more financially included than intra-State outbound workers (n= 20, mean= 1.60, S.D.= 0.681). However, no significant difference was observed among inter-State inbound, inter-State outbound and intra-State outbound workers. Similarly, financial inclusion of inter-State outbound workers is not significant like that of intra-State inbound and intra-State outbound workers.

4.1.1 Regression analysis on Financial Inclusion

TABLE 4.1.2 STATISTICAL SIGNIFICANCE OF THE INDEPENDENT VARIABLE

Coefficients										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-0.100	0.501		-0.199	0.842	-1.097	0.898		
	Monthly Income	2.810E-5	.000	.163	1.357	.179	.000	.000	.778	1.285
	Occupation	.527	.162	.388	3.251	.002	.204	.850	.788	1.270
	Education	.159	.098	.213	1.631	.107	-.035	.354	.660	1.516
a. Dependent Variable: Financial inclusion scores										

Therefore, financial inclusion could not be properly explained by income or education. But, occupation has been a significant predictor for the dependent variable, *i.e.* financial inclusion.

4.2 Remittance among migrant labourers

TABLE 4.2 MULTIPLE COMPARISONS USING GAMES-HOWELL POST HOC ANALYSIS

Multiple Comparisons						
Dependent Variable: Remittance						
Games-Howell						
(I) Category Of Migrant Labourers	***(J) Category Of Migrant Labourers***	***Mean Difference (I-J)***	***Std. Error***	***Sig.***	***95% Confidence Interval***	
					Lower Bound	Upper Bound
Inter-State Inbound	Inter-State Outbound	-5750.000*	1049.749	.000	-8628.69	-2871.31
	Intra-State Inbound	625.000	781.678	.854	-1491.03	2741.03
	Intra-State Outbound	-2375.000*	512.187	.000	-3759.66	-990.34

Inter-State Outbound	Inter-State Inbound	5750.000*	1049.749	.000	2871.31	8628.69
	Intra-State Inbound	6375.000*	1163.098	.000	3231.70	9518.30
	Intra-State Outbound	3375.000*	1002.054	.013	596.03	6153.97
Intra-State Inbound	Inter-State Inbound	-625.000	781.678	.854	-2741.03	1491.03
	Inter-State Outbound	-6375.000*	1163.098	.000	-9518.30	-3231.70
	Intra-State Outbound	-3000.000*	716.350	.002	-4965.19	-1034.81
Intra-State Outbound	Inter-State Inbound	2375.000*	512.187	.000	990.34	3759.66
	Inter-State Outbound	-3375.000*	1002.054	.013	-6153.97	-596.03
	Intra-State Inbound	3000.000*	716.350	.002	1034.81	4965.19
*. The mean difference is significant at the 0.05 level.						

The Games-Howell post hoc analysis revealed that inter-State outbound workers (n=20, mean=13375, S.D. =4293.89) significantly remitted more amounts than both intra-State outbound (n= 20, mean = 10000, S.D = 1282.47) and inter-State inbound workers (n=20, mean=7625, S.D.=1897.88). While in the case of intra-State outbound and inbound workers, intra-State outbound workers (n=20, mean=10000, S.D.=1282.47) remitted more than intra-State inbound workers (n=20, mean=70000, S.D.=2935.71). Therefore, we reject the null hypothesis and accept the alternative hypothesis. Thus, there was no significant difference between inter-State inbound and intra-State inbound workers in respect of remittance.

4.2.1 Regression analysis on Remittance

Multiple regression analysis was conducted in order to investigate the relationship between dependent variable and independent variables. Here monthly remittance was taken as the dependent variable and monthly income, education, occupation and financial inclusion were considered as independent variables.

TABLE 4.2.1 STATISTICAL SIGNIFICANCE OF THE INDEPENDENT VARIABLE

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	936.457	924.140		1.013	.314	-904.524	2777.437
	Occupation	-206.571	115.230	-.099	-1.793	.077	-436.121	22.979
	Education	-80.314	203.043	-.022	-.396	.694	-484.797	324.169
	Income	.726	.053	.869	13.785	.000	.621	.831
	Financial inclusion	-11.240	241.427	-.002	-.047	.963	-492.188	469.707
a. Dependent Variable: Remittance								

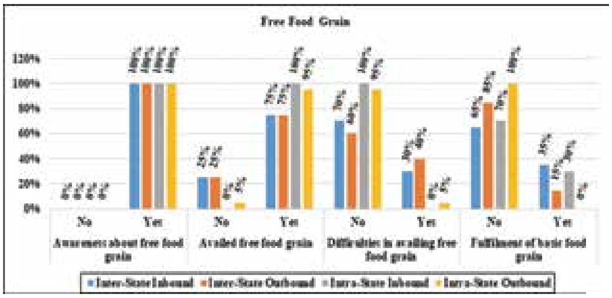
From the data presented above a conclusion can be drawn that monthly income is a significant predictor for the dependent variable, monthly remittance.

4.3 Post-Covid livelihood of Migrant labourers

4.3.1 Free Food Grain

Fig 4.3.1 reveals that all categories of migrant workers are completely aware about the distribution of free food grains during Covid-19. About 40 per cent and 30 per cent of the inter-State inbound and outbound migrant labourers, reportedly faced difficulty in availing the said facility, the reasons being no ration card / up-to-date ration card according to Government norms.

FIG 4.3.1 FREE FOOD GRAIN FACILITIES AMONG DIFFERENT GROUPS



Non-availability of free food grain was comparatively higher among the inter-State outbound labourers - 70 per cent and a lesser percentage of 65 per cent respectively among the inter-State inbound and intra-State outbound.

4.3.2 Effect on Employment

Covid-19 lockdown has significantly affected the employment among different categories of migrant labourers. However, only 20 per cent of the inter-State inbound migrant workers who worked as confectioners remained employed during the lockdown as there were no lockouts in their working place [Fig. 4.3.2 (a)].

FIG 4.3.2(A) EMPLOYMENT LOSS DURING LOCKDOWN

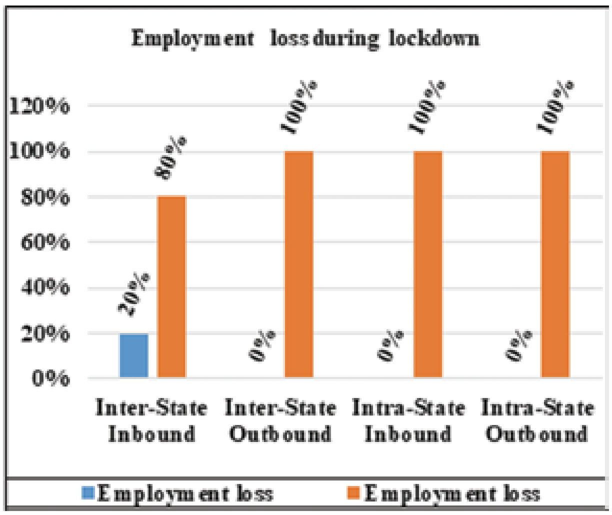
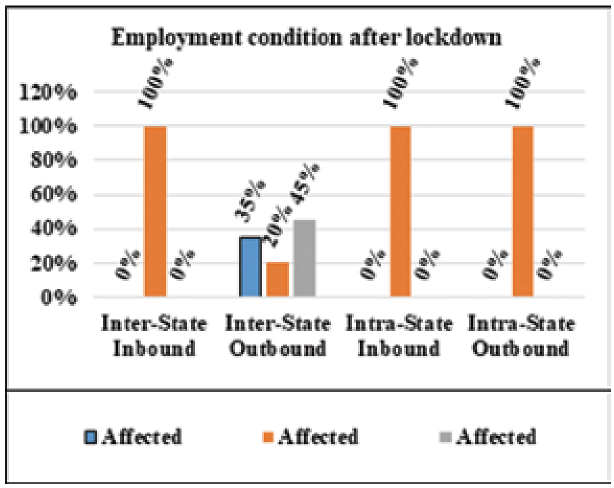


FIG 4.3.2(B) EMPLOYMENT CONDITION POST-LOCKDOWN

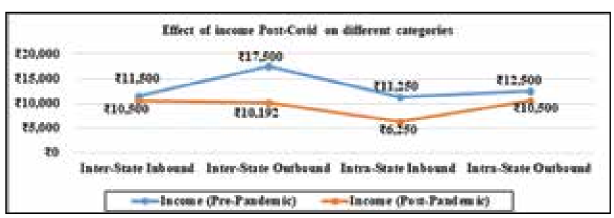


The intra-State inbound and outbound and inter-State inbound migrant workers resumed their jobs after the lockdown [Fig 4.3.2(b)], whereas only 20 per cent of the inter-State outbound labourers resumed their jobs. 45 per cent of the respondents in this category found new employment opportunities in their native place while 35 per cent of the respondents remained unemployed. They are basically international outbound migrants who are forced by the pandemic to return to their native place.

4.3.3 Effect on Income

Fig 4.3.3 clearly depicts the effect of the Covid-19 lockdown on income as most significant among the inter-State outbound labourers. The mean monthly income in this category as reported is Rupees 17500 which fell down to Rupees 10192, which also included 10 international migrant workers. Among them some couldn't go back to their workplace and some didn't want to migrate anymore after the bitter experience of the lockdown.

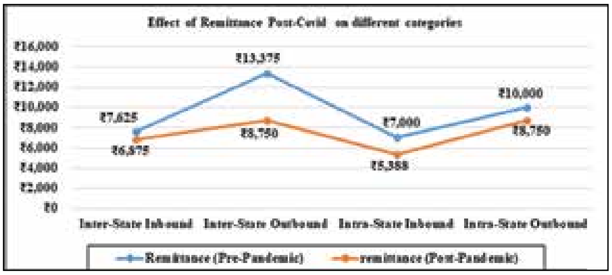
FIG 4.3.3 EFFECT OF INCOME POST-COVID ON DIFFERENT CATEGORIES



The next in line whose income was severely affected were the intra-State inbound labourers. Their mean monthly income before the lockdown was Rupees 11250, which got reduced to Rupees 6250 post lockdown, the major reason being that most of the population in this category were contractual workers and daily wage earners. The businesses for which they worked suffered heavy loss during the pandemic. The average monthly income of the intra-State outbound and inter-State inbound labourers only had a slight fall, as most of the labourers in these categories were permanent employees working as factory labour, drivers, confectioners and foodservice providers. They resumed their work post lockdown; however some of them were contractual labourers like brick kiln workers whose wages were cut down due to decline in business.

4.3.4 Effect on Remittance

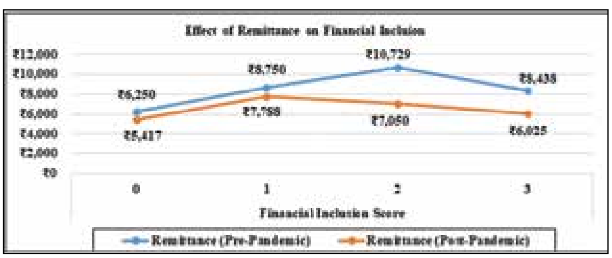
FIG 4.3.4 EFFECT OF REMITTANCE POST-COVID ON DIFFERENT CATEGORIES



There was a drastic decrease in remittance among the inter-state outbound category of labourers with a sharp fall in the mean volume of remittance from Rupees 13375 before lockdown to Rupees 8750 post lockdown in this category; about 35 per cent of the labour became unemployed, 45 per cent of the migrant labourers got new job opportunities in their native land and only 20 per cent of them resumed their previous jobs. In the case of intra-State inbound and outbound workers, the mean volume of remittance fell by Rupees1625 and Rupees1250. In the case of inter-State Inbound workers, most of the migrant workers were permanent labourers who resumed their job after the lockdown was lifted.

4.3.5 Effect on remittance with lower financial inclusion

FIG4.3.5 EFFECT OF REMITTANCE ON FINANCIAL INCLUSION



We could see that the labourers having a financial score of '2' were remitting the highest amount before the lockdown, *i.e.* Rupees 10729, which after the lockdown got reduced to a mean remittance value of Rupees 7050.

V. CONCLUSION

Even though migration plays a significant role in the economy in terms of developmental practices, their rugged livelihood was brought to light during Covid-19 crisis. Using primary survey among the inter-state and intra- state labourers of Titagarh in West Bengal, an attempt was made to examine the financial inclusion and post-Covid effect on their income, remittance and different aspects of their livelihood like free food grain, employment loss and child immunisation.

In order to boost financial inclusion among the migrant labourers it is important to spread awareness regarding their social security rights and measures as enshrined in the Building and Construction Workers Act, 1996, The Inter- State Migrant Workers Act, 1979,etc.. That could help them to know about the benefits of such measures or schemes with the help of banks, digital payment platforms, SHGs and NGOs.

It has become necessary to form an inter-State migration council which would keep up-to-date information of not only permanent migrant working in the organised sectors but also the circular and seasonal migrants who are employed in unorganised sectors in different regions. This would protect their safety, financial wellbeing and social security rights. 'One Nation -One Ration card' is a great initiative taken by the Government of India for all eligible ration card holders which will be of particular help for the migrant workers. The migrant workers have also to be made aware about this novel 'One Nation - One Ration card' scheme. MA

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DIFFICULTIES, COSTS AND OPTIONS OF RENEWABLE ENERGY FOR GOVERNMENT OF INDIA IN THE POWER SECTOR AFTER 2015

Abstract

The energy issues plaguing the developing world may be resolved via machines and other supplementary energy sources. India is looking into many renewable energy sources to solve its energy problems, including the Sun, the wind, the ocean, biomass, and fuel cells. To keep up with the rapid growth of its economy, the nation would need to increase its energy production by a factor of three to four. One option that might be used is switching to a different energy source. One-third of India's primary energy needs are now met by energy produced from renewable sources. Renewable energy sources like solar and wind have become more popular in India because of the priority accorded by the Government thereby decreasing the country's reliance on fossil fuels, bettering the air quality and guaranteeing the country's continued survival. India has invested heavily in the study, creation of prototypes, field testing, mass manufacture, and deployment of numerous renewable energy-generating technologies during the last two and a half decades. This article examines these developments and the policy strategies that may help to overcome the barriers and increase the usage of renewable energy.

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INTRODUCTION

To meet its Intended Nationally Determined Contributions (INDCs) for the two-degree Celsius climate change target after 2015, the Government of India is making significant adjustments to the energy sector to reduce carbon emissions. As a result of these changes, the market is now in a state of flux.[1] Since the difficulties of switching to renewable energy influence the technology sector as well as the social and economic sectors, additional investigation is required. For India to meet its INDC commitments, its power grid must be strengthened, clean energy access must be expanded and fair a participation in the renewable energy transition must be promoted.[2] The present energy sector revolution is mainly driven by the pursuit of sustainable development objectives, including expanding the availability of renewable energy, generating new employment opportunities and reducing poverty.[3] Around 31,000 persons in India are working on grid-connected solar applications, while another 72,000 are employed on off-grid solar projects. The expansion of the wind energy sector has resulted in the creation of 48,000 new jobs. Creating 300,000 new jobs is necessary if India is to meet its goal of tripling its usage of renewable energy by 2022.[4]

India has to take steps toward making its power grids more self-sufficient. Reduction in fossil fuel imports (coal, natural gas, and petroleum) and increased renewable energy consumption, are necessary for India to become energy independent via renewable sources and attain complete grid parity; also the country's power infrastructure must be digitised, decarbonized, and decentralised.[5]

POWER SECTOR AFTER 2015

To produce 40 per cent of its energy from non-fossil fuel sources by 2030, India's power sector faced a significant shift in 2015 resulting in a "surplus" of energy in 2018. This is because the current installed capacity for energy generation is more than 344GW, but peak demand has never exceeded 170GW. The country's peak demand in 2018–19 was only 177GW, whereas the total installed capacity was over 370GW. This trend indicates that the electricity sector is becoming healthier due to regulatory reforms since 2015. That peak and unmet energy demand have dropped significantly over the last 22 years, providing more proof of the excess. India's electricity output has just eclipsed that of both China and the United States, moving it into the third place Globally. India has the most significant annual energy use at 1,117 kWh per person (2017). By 2020, wind power accounted for 43 per cent of renewable energy installations, 78 per cent of the total by coal. In April 2020, renewable energy sources was 23.56 per cent of the whole energy. Decarbonisation, digitalization, and decentralisation of the energy sector in India pose severe regulatory and technological challenges. Several policy instruments were created to hasten the energy transition while still reaching the INDCs in the light of the enormous boost offered by the expansion of renewable energy sources in India's power sector. This action was taken because of the potential of developing renewable energy sources in India's power sector. Another sign that India's energy policy instruments have undergone a sea change is the increased money and attention given to the "Make in India," "Assemble in India," and "Skill India" projects. During this shift, it is essential to systematically address the difficulties associated with the electrical sector if higher social benefits and sustainable development are to be achieved. Increasing renewable energy output beyond 2015 may provide challenges for the Indian power sector.

Difficulties in the Indian Power Sector after 2015

If increasing renewable energy generation was a great victory for India's power sector after the reforms in 2015, integrating 175 GW of RES installed capacity by 2022 was still a significant challenge. Coal thermal power plants run at a production level below their capacity during the time when solar output is at its peak. It reduces plant output and causes wear and tear, which might have far-reaching effects on India's power system reliability and efficiency. It is still unclear who would be accountable for the costs associated with bit scaling and start-stop procedures.[6] Moreover, the high ramping requirements have led to a lack of balancing capacity in India's power grid. Additionally, the DISCOMs' overall system performance is impacted. To alleviate the financial strain of interest payments, power procurement expenses, and aggregate technical and commercial (ATC) losses, the Government of India (GoI) developed the 'UDAY' Plan to assist DISCOMs. However, this has not yielded the desirable results. DISCOMs' average AT&C losses in India have decreased from 20.74 per cent in F.Y. 2016 to 18.76 per cent in F.Y. 2018. Despite encouraging improvements, this is still the case. Compared to their developed world counterparts, DISCOMs in poorer nations often incur far larger AT & C losses. India's energy sector faces significant hurdles, not the least of which is helping the country's State-owned distribution companies (DISCOMs) to become self-sustaining.[7]

Expanding renewable energy (RE) capacity via power purchase agreements (PPAs) results in a gap between electricity supply and demand, decreasing total electricity consumption. It is a serious structural flaw. The practical and budgetary difficulties of grid balancing and integration persist. Green Energy Corridors (GEC) hope to establish operational transmission networks between States and within States. The Ministry of Power (MoP) authorised the proposal to promote the inclusion of 175GW of renewable energy.

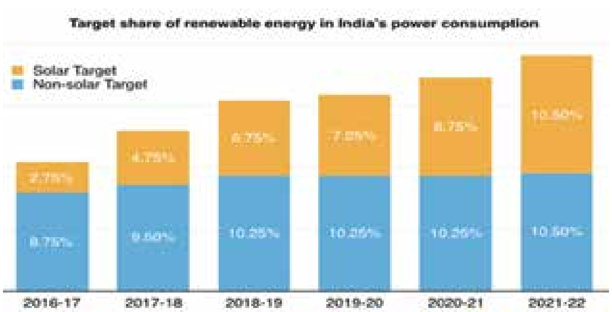
Moreover, to expedite its progress toward meeting its INDCs, India needs access to low-cost Global financing, such as that offered by the Green Climate Fund (GCF). 19 Key challenges for India's power sector include the retirement of units owing to the adoption of new environmental criteria and the extensive clearance of energy storage space equipment like batteries. This article is an analytical foundation for the Electricity (Amendment) Bill of 2020. Within the context of the article's review methodology, this framework is explored in depth.[8]

The Indian Government is looking at the costs and their options

This study's logical structure was used to conduct a cost-benefit analysis of the Government's current market parity and potential for international trade. Energy supply, pricing, and infrastructure issues will persist in India far beyond 2020. A variety of conditions must be met before RES may be appropriately implemented. For customers to be willing to part with their pay for energy, the company has to be robust and give sufficient cash flows to clients if it wants to succeed. We evaluated the prices of traditional fuels and renewable energy sources to conform to the IEA's New Energy Scenario 2020-2040. It provides future projections, demonstrating how solar photovoltaic-driven RES production will have a competitive market advantage over coal-based facilities in India by 2020.[9] [10] When costs are reduced, competition in the wholesale electricity market in neighbouring countries increases. This is because the difference in price per kilowatt hour between fossil fuels and alternative energy sources is less than INR 1 (USD 0.013).[11]

For the 2019–20 fiscal year, the Indian Government's Ministry of Power vide order no. 23/03/2016-R&R dt 14/6/2018 has mandated a 7.25 per cent Renewable Purchase Obligations (RPO), with a 10.25 per cent RPO target for sources other than solar. After checking for conformity, it was ruled that DISCOMs may prioritise fossil fuel-dominated businesses as their primary energy generator. Despite this, the RPO did not adhere to the policy.[12]

FIG. 1 TARGET SHARE OF RENEWABLE ENERGY IN INDIA'S POWER CONSUMPTION



(Source MOP, 2018)

RENEWABLE ENERGY IN INDIA

As of 2017, India was home to about 1028 million people, which continues to rise at 1.58 per cent yearly. Because of its declining dependence on fossil fuels for electricity, India will experience severe energy shortages in the following decades. Rising energy costs and unpredictability will exacerbate the situation. Another important cause of global and local environmental issues is using fossil fuels for energy. At the current exchange rate, India is the world's 12th large economy, with a GDP of about a trillion dollars (2008). Coal, petroleum, and imported oil are the most widely used forms of energy production. In the light of the present energy crisis, it is no longer possible to rely on these sources since they are both environmentally destructive and unable to meet current demand. As a result, India has to undergo transition from coal and crude oil towards the usage of renewable power sources to ensure the ongoing development of its economy.

The Ministry of New and Renewable Energy is aware that the renewable energy sector needs Government assistance to thrive. The Government gives generous subsidies to research and development centres to help defray project expenses, but these subsidies are far more modest for private enterprises. At the outset of a long-term breakthrough, private sector R&D subsidies may be raised. Some renewable energy technologies have been used in suburban and metropolitan areas during the last two decades.[13]

Biomass

Increased attention has been paid to biomass as a fuel and now it meets 14 per cent of the world's total final energy demand.[14] Greenhouse gases like carbon dioxide are produced mainly due to the burning of fossil fuels; however, biomass and other renewable energy sources do not contribute to this process. Assuming a conversion efficiency of 1per cent , photosynthesis is predicted to create 220 billion dry metric tonnes of biomass annually throughout the planet.[15] [16]

Hydropower

Hydropower is a kind of renewable power that harnesses the kinetic and potential capacity of moving water to produce hydroelectricity. Hydropower is the most widely used renewable power because of its wide use in the modern world. . Only 35 per cent of hydropower's 150,000 MW potential has been exploited thus far.

Wind energy

Everywhere on Earth, in theory there is potential to harness wind power. This may be an excellent alternative if we run out of fossil fuels. Wind power can potentially augment the more costly diesel power used to provide energy to remote farms, homes, and other facilities throughout the globe. Depending on where you live, you may notice a significant range in the wind's intensity.

Solar energy

Solar energy, directly from the Sun or indirectly through Earth's magnetic field, is the most plentiful kind of energy on our planet. Solar energy is the quickest and easiest option. By converting solar energy into usable electricity, solar cells may provide power for items like LED lights, water pumps, mobile devices and provide power to remote places without access to the grid.[17]

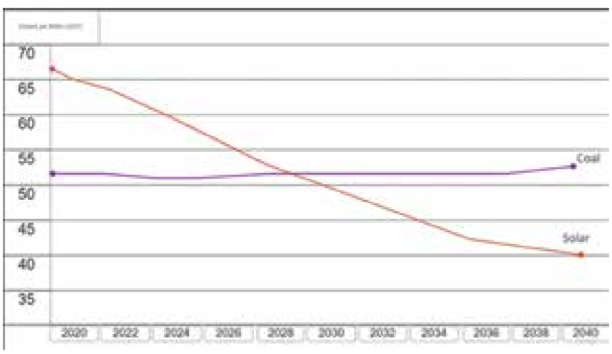
Geothermal energy

Both surface heat and heat deep under the Earth's crust might be used to power a geothermal energy system. Despite India's scorching heat, geologists have discovered over 340 hot springs. The SONATA, a mountain range stretching over a mile and a half, encompasses the bulk of India's regions.[18]

RENEWABLE SOURCES OF ENERGY AND THE FUTURE OF INDIA

The amount of MWh generated is projected to increase by 60,000 MW from renewable energy sources between 2031 and 2032. By 2031, renewable energy will be critical in allowing the poor to share economic growth benefits. More than 300,000 crores of rupees will be spent on renewable energy during the next quarter century. The MNRE aims to expand the number of locations in the State that can generate and sell renewable energy at a lower cost to consumers. Wind turbines and other renewable energy sources are the subjects of intensive study and development by many private and public organisations. Both non-profit and Government entities are making efforts in this direction. Institutions like the Indian Institutes of Technology and the National Institutes of Technology, businesses like the Indian Oil Company Limited (IOCL), and think tanks like The Energy Resource Institute (TERI) are just a few examples. The Centre for Wind Energy Technology, is working on similar aims.

FIGURE 2 INDIA'S SOLAR PHOTOVOLTAIC (PV) AND COAL-FIRED POWER PLANT LCOES.



(From 2020 to 2040, the New Policies Scenario 19) projects[19]

CONCLUSION

Global warming, increasing electricity costs and the current energy shortage have sparked a renewed interest in the creation of more sustainable methods of power generation throughout the Globe in recent decades. The United Nations developed the Sustainable Development Goals (SDGs)to provide a sustainable, long-term, and environmentally friendly energy supply. To cater to its huge population of 1.36 billion, Indian Government has committed to produce 175 GW of renewable energy by 2022. To encourage the growth of appropriate renewable energy sources, energy laws in each State were crafted to reflect each State's distinct physical and geological setting.

The urgent shift away from petroleum-based energy systems and toward sustainable energy systems is necessary to lessen dependence on depleting fossil fuel sources and solve climate change. Renewable energy has the potential to create a large number of new jobs in a variety of industries, especially in underdeveloped areas. Because of this, the rural sector has to be connected into distinct networks, the price of which is based on the load factor. The strategy is to promote renewable energy to ensure energy security and economic success in the face of increasing energy prices, losing competitiveness, rising healthcare costs, and deteriorating environmental conditions. This is done to achieve energy security. It is possible to examine the usage of renewable energy sources such as wind and hydropower on a small scale due to their lower overall costs. MA

Global warming, increasing electricity costs and the current energy shortage have sparked a renewed interest in the creation of more sustainable methods of power generation throughout the Globe in recent decades

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THE ROLE OF BANKS IN ENSURING FINANCIAL INCLUSION

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Abstract

Financial inclusion is the method of guaranteeing access to financial services and timely and adequate credit for vulnerable groups such as weaker section, low income people. In contrast to traditional banking and financial services, it has adopted new generation banking systems and online financial transactions for client satisfaction; financial inclusion provides financial products and solutions economically at the door step of the clients quickly. It is seen that over 40 per cent of the population now utilises financial inclusion to have access to financial services and timely and adequate credit for vulnerable groups. Economically weaker communities face challenges like irregular job, inadequate resources, unemployment, lack of education, paucity of identity proof and because of this condition of bank procedure, many people are deprived from accessing bank facilities and hold abundant cash at home or investment in some private schemes.

REVIEW OF LITRATURE

Financial inclusion, according to Dr. Raghu Ram Rajan, former Governor of RBI and a key person of the financial sector reforms, refers to widespread access to a variety of financial services at no additional cost. It can be said that this refers to the accessibility of financial products and services to regular people and business people (especially in remote areas), who were previously excluded from such facilities due to a lack of programme and technical knowledge and other necessary conditions.

This initiative, which concentrated on the need for work for women and those who were disadvantaged, served as a tool for development and a method for eradicating poverty from the nation.

Government of India brought all segments of society under one umbrella through the Jandhan Yojana and Aadhar mobile transactions in banking services, which acted as a game changer in Government policy on financial inclusion. The basic aim of this is to abolish corruption and minimise the role of intermediaries through direct benefit transfer.

It has been discovered that the functions of the commercial banks in the use of financial transaction accounts is a significant step forward in India's cashless payment movement.

OBJECTIVE OF THE STUDY

1. Peer to peer acknowledgement about FINTECH.
2. Proper working procedure of every financial transaction.
3. Easy accessibility of FINTECH to prospective users.
4. Disseminate new generation banking and financial services to the layman.
5. Implement exact, rapid and transparent financial services.

RESEARCH METHODOLOGY

A pilot study was conducted by collecting data from various departments of State Bank employees working in Kanpur, by using chart, diagram, graph and percentage of analysis.

A feasible visit was made to the Reserve Bank of India at Kanpur for ascertaining the financial performance and inclusion in Kanpur region.

FINANCIAL PERFORMANCE OF STATE BANK OF INDIA

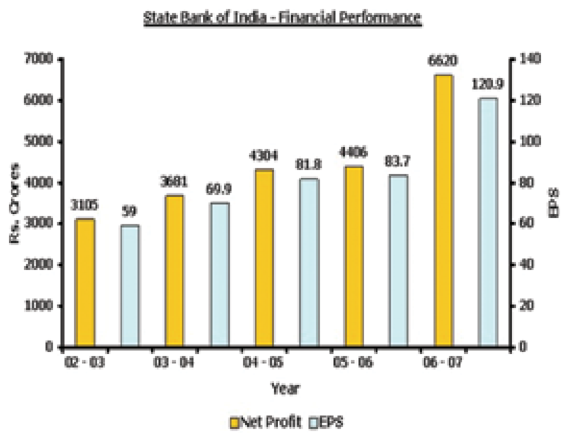


TABLE 1

YEAR	NET PROFIT (in crore)	EARNING PER SHARE (in crore)
2002-2003	3105	59
2003-2004	3681	69.9
2004-2005	4304	81.8
2005-2006	4406	83.7
2006-2007	6620	120.9

Source: RBI report on State Bank of India

The above table shows that the performance of State Bank of India is improving year after year by making ratio analysis of profit and loss from 2002-2003 to 2006-2007 and a drastic improvement was seen. By virtue of increase of profit the earning per share also increases year after year.

ROLE OF BANKS IN FINANCIAL INCLUSION

The following illustration depicts the role of banks in financial inclusion. With the emerging technology of online banking and smart cards, it is undoubtedly a major explanation for the enhanced utilisation of banking services.

TABLE 2 ACHIEVEMENT OF PRIORITY SECTOR LENDING TARGETS

(Rs. in crore)

Financial Year	Public Sector Banks	Private Sector Banks	Foreign banks
1	2	3	4
2020-21	24,16,750	14,33,674	1,99,969
	(41.06)	(40.62)	(41.02)
2021-22	26,23,666	16,87,138	1,94,031
	(42.45)	(43.27)	(42.28)

*: Data are provisional

Sources: RBI report on financial inclusion

Note: Figures in parentheses are percentage to adjusted net bank credit (ANBC) or credit equivalent of off-balance sheet exposure (CEOBE), whichever is higher.

SIGNIFICANCE OF FINANCIAL INCLUSION IN INDIA

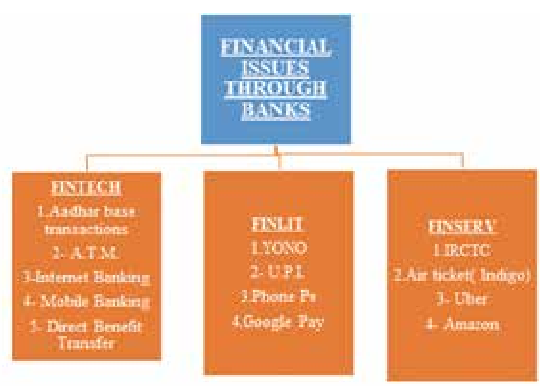
With the release of its annual policy statement, the Reserve Bank of India introduced this concept. Financial inclusion's journey can be traced all the way back to 1950. Credit distribution to the underserved, or economically disadvantaged population was the primary focus at the time.

Spreading awareness about financial inclusion, which directly benefited the public through digitalization and demonetization, was an important step the Modi Government took to ensure transparency in financial transactions. All interested individuals should have a bank account for financial transactions in order to eliminate intermediaries and make quick transfers of economic benefits. The RBI intervened to facilitate progress by effecting the necessary legal and intuitive transformation.

Through the Core Banking Solution (CBS), Mobile Banking, and Internet Banking, new methods of using the internet network in the banking area/field emerged, which was another significant change in financial inclusion. Furthermore certain digital protection issues ought to be viewed as in the case of SMS, OTP, MPES, POS, POP and Aadhar number.

Companies in the financial technology industry must give this support. It was a significant step considering the Indian Government's efforts to bring down corruption and make every financial transaction transparent. As a result, India is moving towards poverty elimination through financial inclusion.

ANALYSIS & INTERPRETATION OF DATA



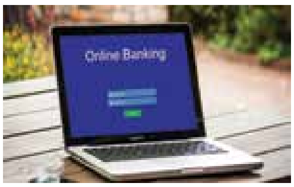
A- FINTECH (FINANCIAL TECHNOLOGY)

(i) Aadhar base transactions

It is one-of-a-kind Indian citizen identification system that began in the village of Timbale (Naasel) in the State of Maharashtra in September 2010. The main goal is to make economic transactions more transparent so that the public can directly benefit from them. According to reliable 90 per cent Aadhar work has been finished till now.

(ii) A.T.M. (Automated teller Machine)

The world's first ATM started functioning from Barclays Bank, Enfield Branch in north London on 27 June 1967. Thus ATMs have been successfully functioning for the last fifty five years.



(iii) Internet Banking

It is a new financial technique widely used in banking today. Core Banking Solution (CBS) of software system of computer serves as the foundation of this technique. Through the use of an internet connection, people all over the world are now able to perform banking tasks round-the-clock. An estimated 30 per cent of banking-related work in India is done through online banking.

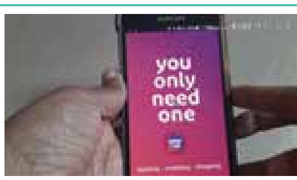
(iv) Mobile Banking

It is a new financial method that uses the internet and a banking app on a mobile device to let people do any banking work they need to do. It is very helpful for transferring money quickly and easily. It saves people's time by preventing them from having to wait in long queues at banks for everyday banking tasks.

(v) Direct Benefit Transfer (D.B.T.)

The Direct Benefit Transfer (D.B.T.) program was launched by the Indian Government on January 1, 2013. This is very helpful to people who don't have much money and the objective is to reform the Government's delivery system by reorganizing the old procedures so that people can get welfare more quickly, easily and it is done with more precise targeting of the people who need it.

B- FINLIT (FINANCIAL LITERACY)



(i) You Only Need One (YONO)

You Only Need One (YONO) is an integrated digital banking platform offered by State Bank of India to enable users to access various functions of financial services available under one roof. It is an IBM-developed smartphone application that assists users to perform everyday banking tasks from their mobile itself.

UNIFIED PAYMENTS INTERFACE

(ii) UPI (Unified payment interface)

It is NPCI's instant real-time payment system designed to make inter-bank transactions via mobile phones easier. It is an internet-based application of round the clock payment system that enables instantaneous money transfers between two parties. Money is transferred using the IFSC code or account number of another bank under this system.

PhonePe

(iii) Phone Pe

The *Phone Pe* application is based on the UPI payment system. *Phone Pe* uses multilingual financial technology to make mobile and digital payments. It is a mobile app that allows users to make and receive payments from different people and also make payments for everyday purchase of commodities.

(iv) Google Pay

In 2015, Google developed its first mobile payment system called "Google wallet".Google changed its name from "Google Wallet" to "Google Pay" in 2018. It is now one of the most used payment methods as it helps users to make and receive payments directly into their bank accounts by just using their mobile number.

C- FINSERV (FINANCIAL SERVICES)

(i) Online Railway Ticket (IRCTC)

The Indian Railway Catering and Tourism Corporation Ltd. began operations on September 27, 1999, under the Companies Act of 1956. Railway online ticket booking is accomplished through online banking; after purchasing a ticket, passengers can take a trip conveniently. Besides window tickets, an approximated 4 lakhs online tickets are booked within 24 hours. Banks provide a protected platform for customers to make a payment to IRCTC and also assist users in obtaining refunds in the event of a ticket cancellation. As a result, banks play a critical role in offering online ticket booking services.

(ii) Online Air ticket (Indigo)

Inter Globe Aviation Ltd., doing business as Indigo, is an Indian low-cost airline that enables customers to book flights online. Online air tickets are purchased utilising Internet Banking and various digital payment gateways such as ATMs, credit cards, and so on.

(iii) UBER

In 2013, Uber was launched in India with the objective of providing a cost effective, secure, and efficient mode of transportation. It later extended its offerings to include package delivery as well as food delivery (Uber Eats). As of December 2021, it operated in nearly 73 countries and 10500 cities. Uber services are accessible through a mobile application and the company's official website. Banks play a critical role in transferring payments from users to Uber services via online payment and smart cards, etc.

(iv) Online Shopping (Amazon)

Amazon is an online platform where all types of commodities can be bought and sold using an online shopping and banking system. The Amazon app is a mobile application that is primarily used for online shopping. There are no obstacles in financial transactions as a result of CBS in banking; the entire world has become a worldwide circle for each other. Over 70 per cent of users in India resort to cash on delivery (COD) transactions, while the remainder use online payment systems.

IMPLICATION AND SUGGESTION

1. To raise public awareness of the benefits of financial inclusion to society.
2. To encourage the general public to use digital technology.
3. To abolish intermediaries from the Govt. Scheme by using D.B.T. (Direct Benefit Transfer).
4. Digital technology should be well understood by bank employees, especially those working in remote areas.
5. To make all kinds of financial transactions more transparent by using FINTECH.
6. To make a robust network system for the Internet. MA

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   c. *Chartered Secretary published by I.C.S.I.*
5. *Times of India (Newspaper)*
6. *Hindustan Times (Newspaper)*
7. *Dainik Jagran (Newspaper)*

EFFICACY OF EDUCATIONAL SPENDING IN INDIA: AN ARDL APPROACH

Abstract

Education is the fundamental cornerstone in the economic and social development of any nation. It is argued as one of the basic factors which vindicates the gap between developed and underdeveloped nations. India, being a developing country, exhibits fragile spending hovering around 3 to 4 percent of total expenditure. Besides, centre as well as states jointly spent on an average 3 percent of Gross Domestic Product (GDP) during 2014-15 to 2018-19 (Economic Survey 2019-20). However, National Education Policy (NEP) 2020 recommends 6 percent of Gross Domestic Product (GDP) to be spent on education. The linkage between public spending and educational outcomes has been explored very well in the literature. However, such efforts are found mainly focussed towards developed countries. Pertinently, among the developing countries very sparse studies have been conducted in India. This paper plugs the gap by investigating the nexus between public spending and educational outcomes in the Indian context. The study concluded with the findings that spending does not prove fruitful in improving the gross enrollment rate at various levels both in the short run as well as long run.

Aristotle, the Greek philosopher once said that "Education is an ornament in prosperity and a refuge in adversity". Thousands of years later, Millennium Development Goals (MDG'S) in 2000 and later on Sustainable Development Goals (SDG's) in 2015 were formulated which also acknowledged the role of education in developing sustainable future. Increased access to education along with improvement in enrolment rates is considered as an important catalyst in the socio economic development. Keeping this realization along with various theoretical underpinnings in consideration, every year OECD countries spend 7 to 17 per cent of their total public expenditure on education with an average expenditure of 11 per cent (OECD, 2019). In India, education is the subject matter of Union List and is thus a prerogative of both the Centre as well as States. Despite this, fragile spending behaviour is witnessed in India with expenditure hovering around 3 to 4 per cent of the total expenditure. Besides, the Centre and States jointly spent on an average 3 per cent of Gross Domestic Product (GDP) during 2014-15 to 2018-19 (Economic Survey 2019-20). However the National Education Policy (NEP) 2020 recommended 6 per cent of Gross Domestic Product (GDP) to be spent on education.

The linkage between public spending and educational outcomes have been explored very well in the literature. However, such efforts are found mainly focussed towards developed countries [*Flores (2017*); *Agasisti (2014); Afonso, Schukneckt & Tanzi (2004); Afonso and Aubyn (2005); Jayasuria and Wodon (2007)]* and very few [*Baldacci, Guin-Siu & Mello (2003); Baldacci, Clements, Gupta & Cui (2008)]* are directed towards developing and transition economies. Pertinently, among the developing countries very sparse studies have been conducted in India. This paper seeks to plug the gap by investigating the nexus between public spending and educational outcomes in the Indian context.

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The data for public expenditure on education (PEE) comprises of both revenue and capital expenditure budgeted by Central Government as well as State Governments. Gross enrolment ratio at various levels like Classes I to V and Classes VI to VIII is used to quantify the educational outcome. All the variables are analyzed for the years 1986-87 to 2015-16.

The underlying hypothesis verified in this sub section is whether public expenditure on education is having any say in the improvement of educational outcomes or not. It is pertinent to mention that educational outcomes are associated with several other variables like number of institutions, household income and parent characteristics [Devi & Devi, (2014); Arif et al., (1999); Mani et al., (2013); Irfan, (1995);Nidup, (2016); Zimmerman, (2001)households must finance educational investments out of past savings or current earnings. Poor households, with low savings and low current income, may accordingly be highly constrained in their educational choices, whereas richer households are not. The commonly used log-expenditures specification of the relationship of income to school enrollment may therefore be imprecise. Using data from the 1995 Bulgarian Integrated Household Survey, this analysis shows that the roughly 50% of Bulgarian households with expenditures per adult-equivalent of less than 5,000 Leva (1995 prices]. In this investigation, the number of institutions (NOI) is tested along with public expenditure. The above proposition can be modelled for different health outcomes as under:

$$GER_{v} = \alpha + \beta_1 (PEE) + \beta_2 (NOIP) + e \qquad (1)$$

$$GER_{viii} = \alpha + \beta_1 (PEE) + \beta_2 (NOIUP) + e \qquad (2)$$

Descriptive statistics of variables incorporated in the above equations are presented in Table 1.

TABLE 1: DESCRIPTIVE STATISTICS

	GER 5	GER 8	PEE	LPEE	NOIP	NOIUP
Mean	99.4	67.37	114014	11.06	680651	265864
Median	98.6	61.74	65818	11.09	653028	214255
Maximum	116	92.80	401440	12.90	858900	577800
Minimum	81.7	48.19	8938	9.098	530728	138030
Std. deviation	9.2	13.00	119844	1.142	110935	122962
Coeff. of Variation	0.09	0.19	1.05	0.10	0.16	0.46
Skewness	0.16	0.528	1.198	0.027	0.21875	0.85375
Kurtosis	2.3	2.063	3.061	1.899	1.57446	2.61138
Jarque-Bera	0.8	2.490	7.182	1.518	2.7794	3.83325
Probability	0.68	0.287	0.027	0.468	0.24914	0.1471

Mean value of gross enrolment rate upto primary classes (GER5) is found to be 99.4 with the minimum and maximum values of 81.7, 116 and coefficient of variation approximately 9 per cent signifying little change in its magnitude over the reported period. Besides, other measures of dispersion like skewness and kurtosis depict that data is slightly positively skewed and platykurtic. However, probability value of Jarque-Bera statistics signify that by and large, data pertaining to gross national income endures the normality assumption. Accordingly mean values of gross enrolment rate upto middle classes (GER8), log of public expenditure on education (LPEE), number of institutions at primary level (NOIP), number of institutions upto middle level (NOIUP) are witnessed as 67.37, 11.06, 680651 and 265864 respectively. Furthermore minimum and maximum values for the said variables are 48.19, 92.80; 9.098,12.90; 530728, 858900; 138030 and 577800 with coefficient of variation 19 per cent, 10 per cent, 16 per cent and 46 per cent respectively signifying mild to sizeable variation across the variables. Moreover results of skewness and kurtosis measures signify that all the variables are positively skewed and leptokurtic distribution is observed in all the variables. Probability values of Jarque-Bera statistics indicate that all the variables are discerning normality barring public which when converted into log form also satisfies the normality assumption. Additionally, histogram of the said variables is presented in Figure 1 to 5 which also supplements the conclusion drawn from Jarque-Bera statistics pertaining to normality.

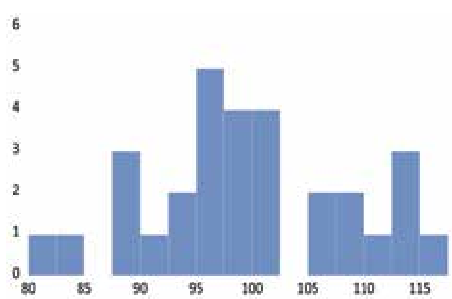

FIG. 1: RESULT OF NORMALITY TEST FOR GER CLASSES I TO V

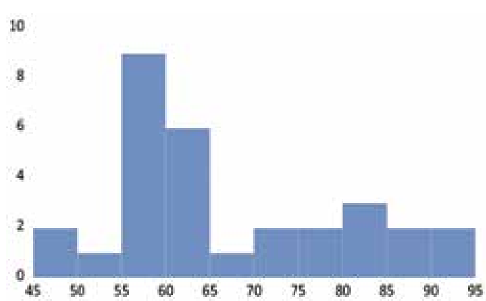

FIG. 2: RESULT OF NORMALITY TEST FOR GER CLASSES VI TO VIII

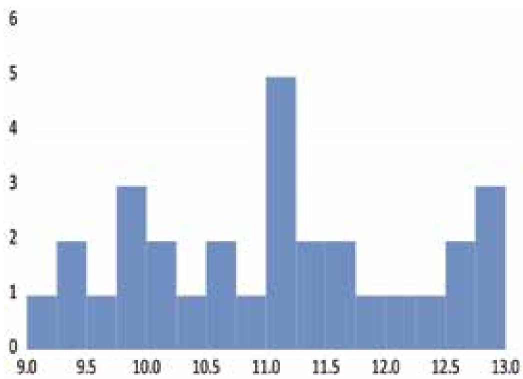

FIG. 3: RESULT OF NORMALITY TEST FOR LPEE

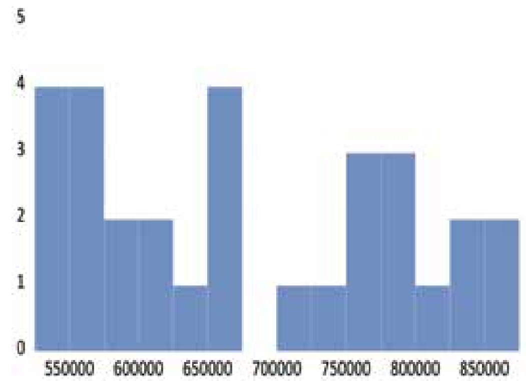

FIG. 4: RESULT OF NORMALITY TEST FOR NOIP

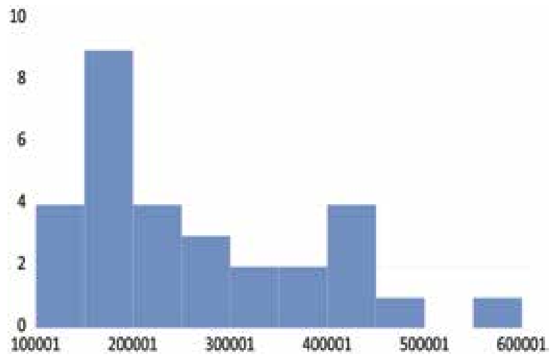

FIG. 5: RESULT OF NORMALITY TEST FOR NOIUP

After satisfying normality assumption, all the variables are examined for unit root test. The nature of data for these variables is described in Figure 6 which discern non stationary nature of data.

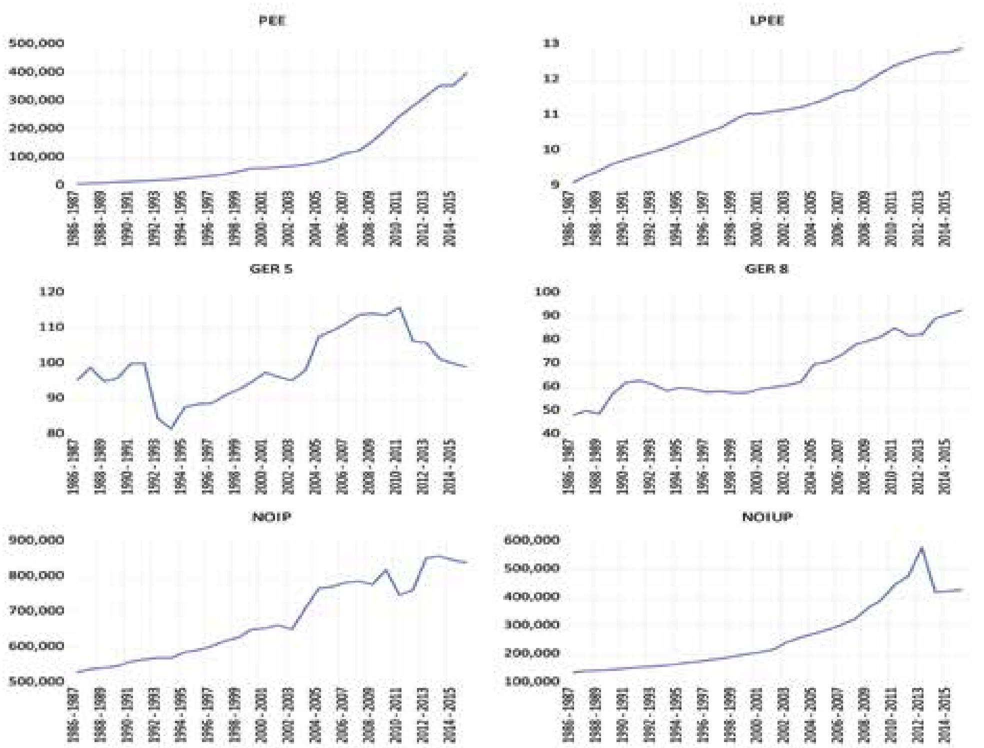

FIG. 6: NATURE OF DATA FOR LPEE, GER AND NOI AT VARIOUS LEVELS

Augmented Dickey Fuller (ADF) test is employed to subject the data to unit root test. In this case null hypothesis states that data is not stationary against the alternative which assumes that data is stationary. The output of the test as shown in Table 2 indicates that none of the variables is stationary at level. With this background it becomes clear that the given situation is suitable for Autoregressive Distributed Lag (ARDL) co-integration technique which requires variables to be of order I (0) or I (1) or both.

TABLE 2: RESULT OF ADF UNIT ROOT TEST

Variables	LEVEL		IST DIFFERENCE	
	Intercept	*Trend and Intercept*	*Intercept*	*Trend and Intercept*
LPEE	- 0.394012 (0.8972)	-2.600748 (0.2827)	-3.630699** (0.0115)	-3.555386* (0.0526)
GER 5	-1.361076 (0.5871)	-1.499444 (0.8065)	-4.570089*** (0.0011)	-4.478126*** (0.0070)
GER 8	- 0.185740 (0.9668)	-1.199684 (0.8918)	-4.599590*** (0.0011)	-4.618509*** (0.0051)
NOIP	- 0.558507 (0.8651)	- 3.138257 (0.1167)	-5.475643*** (0.0001)	-5.365694*** (0.0009)
NOIUP	4.942422 (1.0000)	3.597283 (1.0000)	1.468644 (0.9985)	-4.222135** (0.0144)

Note: ***, ** and * indicates significant at 1, 5 and 10 per cent levels

MULTICOLLINEARITY TEST

Before running the cointegration test, it is imperative to check the independent variables for correlation so that they are not highly associated with each other. This is required to make sure that the statistical properties of regression coefficients remain intact. Table 3 presents the correlation coefficients of independent variables.

TABLE 3: CORRELATION MATRIX OF VARIABLE

	NOIP	NOIUP
LPEE	0.7129	0.65173

From the above Table, it is observed that independent variables are not highly associated with each other as none of them surpasses the maximum threshold of 0.8. Therefore, it can be said that multicollinearity does not exist among the variables. Furthermore, all the variables are having positive association with each other.

COINTEGRATION FOR MODEL WITH GER 5 AS DEPENDENT VARIABLE

Next ARDL bound testing approach of cointegration (*Pesaran et al., 2001*) was carried out to verify the existence of long run relationship, if any. This approach has many advantages as it can be put to use in small samples and is applicable irrespective of the order of integration I.e. I(1), or I(0) but with a caution that no variable should be integrated of second order. The cointegration result, for model with GER 5 as dependent variable, is depicted in Table 4. In this case null hypothesis states that there exists no long run relationship between education expenditure and enrolment rate. Since the value of F statistics (2.579415) is below the lower bound (3.79) value and also absolute value of 't' statistics (2.194376) is less than the lower bound value (2.86) at 5 per cent which clearly signifies absence of cointegration between GER 5 and LPEE thus signifying no long run association. In this case long run model and error correction model are of no use, and only short run model may prove useful. However in the instant case the selected model as per Akaike info criterion (AIC) is (1, 0, 0) meaning thereby no lag is entertained for independent variables which ultimately implies that short run model is not feasible. Thus we can conclude that public expenditure does not prove fruitful in enhancing gross enrolment ratio upto the primary class.

TABLE 4: BOUND TEST OF COINTEGRATION FOR GER 5 AS DEPENDENT VARIABLE

[Selected Model: ARDL (1, 0, 0)]

F-Bounds Test				
Test Statistic	Value	Significance level	I(0)	I(1)
F-statistic	2.579415	10%	3.17	4.14
K	2	5%	3.79	4.85
		2.5%	4.41	5.52

		1%	5.15	6.36
t-Bounds Test				
Test Statistic	Value	Significance level.	I(0)	I(1)
t-statistic	-2.194376	10%	-2.57	-3.21
		5%	-2.86	-3.53
		2.5%	-3.13	-3.8
		1%	-3.43	-4.1

Afterwards, residual diagnostic of the model is carried out by Breush-Godfrey serial correlation LM test. Here null hypothesis states that our model is not suffering from serial correlation. The result of the said test as shown in Table 5 indicates that our model does not suffer from serial correlation as 'F' statistic and observed 'R' squared statistic are insignificant at 5 per cent level.

TABLE 5: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	0.583592	Prob. F(2,23)	0.5659
Obs*R-squared	1.400591	Prob. Chi-Square(2)	0.4964

Moving on the next stability diagnostics is run for the model by employing CUSUM test and CUSUM Squares test as shown in Figures 7 and 8 which exhibit satisfactory outcome as neither of the breaks could be identified. The test signifies that our model is stable and confined within the limits of 5 per cent significance level.

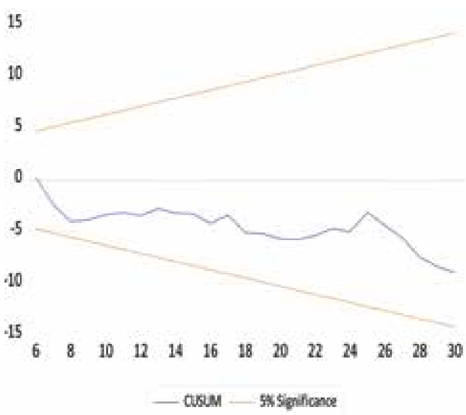

FIG. 7: PLOT OF CUSUM TEST

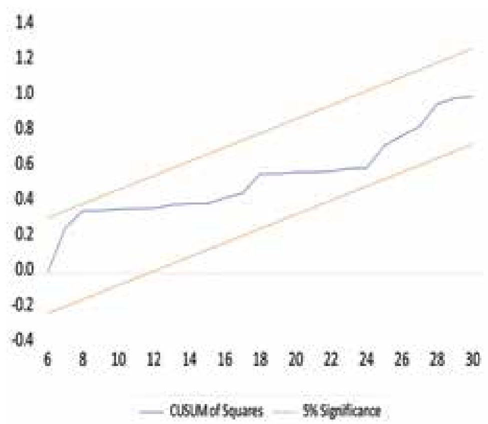

FIG. 8: PLOT OF CUSUM TEST

COINTEGRATION FOR MODEL WITH GER 8 AS DEPENDENT VARIABLE

The cointegration result, for model with GER 8 as dependent variable, is depicted in Table 6. In this case, null hypothesis states that there exists no long run relationship between public expenditure on education and enrolment rate of upper primary classes. Since the value of F statistics (1.083619) is below the lower bound (3.79) value and also the absolute value of 't' statistics (1.500660) is less than the lower bound value (-2.86) which clearly signifies absence of cointegration among the GER 8 and LPEE that is indicative of non existence of any long run association. In this case long run model and error correction model are of no use; however, short run model is feasible.

TABLE 6: BOUND TEST OF COINTEGRATION FOR GER 8 AS DEPENDENT VARIABLE

[Selected Model: ARDL (1, 0, 1)]

F-Bounds Test				
Test Statistic	Value	Significance level	I(0)	I(1)
F-statistic	1.083619	10%	3.17	4.14
K	2	5%	3.79	4.85
		2.5%	4.41	5.52

		1%	5.15	6.36
t-Bounds Test				
Test Statistic	Value	Significance level.	I(0)	I(1)
t-statistic	-1.500660	10%	-2.57	-3.21
		5%	-2.86	-3.53
		2.5%	-3.13	-3.8
		1%	-3.43	-4.1

Afterwards, residual diagnostic of the model is carried out by Breush-Godfrey serial correlation LM test. Here null hypothesis states that our model is not suffering from serial correlation. The result of the said test as shown in table 7 indicates that our model does not suffer from serial correlation as 'F' statistic and Observed 'R' squared statistic are insignificant at 5 percent level.

TABLE 7: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	0.403246	Prob. F(2,22)	0.6730
Obs*R-squared	1.025508	Prob. Chi-Square(2)	0.5988

Moving on next stability diagnostics is run for the model by employing CUSUM test and CUSUM Squares test as shown in Figures 9 and 10 which exhibit satisfactory outcome as neither of the breaks could be identified. The test signifies that our model is stable and confined with the limits of 5 per cent significance level.

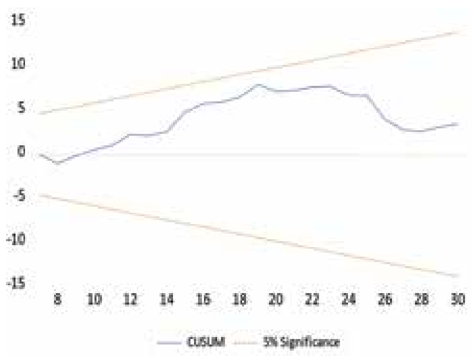

FIG. 9: PLOT OF CUSUM TEST

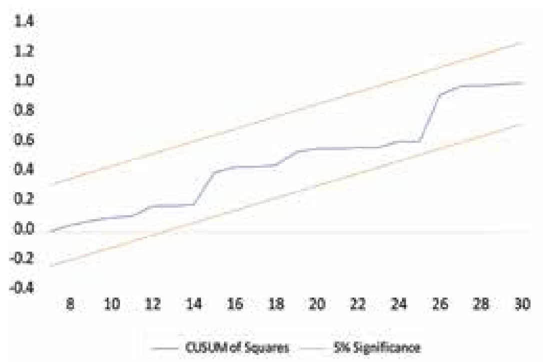

FIG. 10: PLOT OF CUSUM TEST

TABLE 8: RESULT OF SHORT RUN MODEL

Dependent Variable: D(GER 8)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.436206	2.019103	2.692387	0.0127
D(NOIUP)	-1.31	1.39	-0.945618	0.3538
R-squared		0.201061		
Adjusted R-squared		-0.139605		
Durbin-Watson stat		1.684470		

Subsequently residual diagnostic of the model is carried out by Breush-Godfrey serial correlation LM test. Here null hypothesis states that our model is not suffering from serial correlation. The result of the said test as shown in Table 9 indicates that our model does not suffer from serial correlation as 'F' statistic and Observed 'R' squared statistic are insignificant at 5 percent level.

TABLE 9: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	0.403246	Prob. F(1,20)	0.6730
Obs*R-squared	1.025508	Prob. Chi-Square(1)	0.5988

Next stability diagnostics is run for the model by employing CUSUM test and CUSUM Squares test as shown in Figures

13 and 14 which exhibit satisfactory outcome as neither of the breaks could be identified. The test signifies that our model is stable and confined with the limits of 5 per cent significance level.

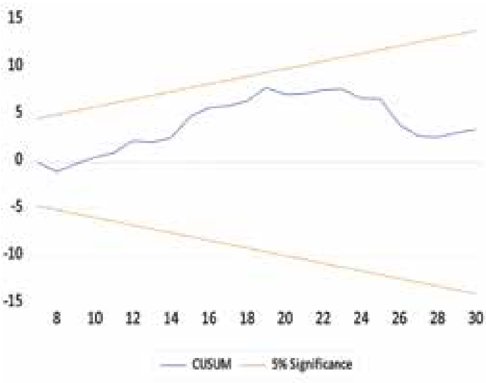

FIG. 11: PLOT OF CUSUM TEST

FIG. 12: PLOT OF CUSUM TEST

Good governance is also reckoned as an important reason which obstructs public spending efficiency

CONCLUSION

From the foregoing discussions on the efficacy of public education, it is recognized that spending does not prove fruitful in improving the gross enrolment rate at various levels both in the short run as well as long run. Besides, the number of institutions at various levels was also found not having any impact on the enrolment rates at different levels. Our results corroborate with the findings of *Flores (2017), Abbasali (2016), Iheoma (2014), Agasisti (2014), Iheoma (2012), Jayasuria and Wodon (2007), Afonso, Schukneckt and Tanzi (2004),*

This absence of linkage between public spending and enrolment rates is attributed to many reasons like poor health condition of students (*Bhakta, 2014),* crowding out of private expenditure (*Abington and Blankenau, 2013),* governance (*Rajkumar and Swaroop, 2008)* and corruption (*Suryadarma, 2012*). *Bhakta, (2014)* argued that efficiency of public expenditure vis a vis enrolment rates turns out to be fragile because of the pitiable health status of the students. Another reason for under performance of public spending has been unveiled by *Abington and Blankenau, (2013)*. They contend that public expenditure crowds out private investment due to which no improvement in enrolment rates can be attributed to educational spending. In a similar vein, good governance is also reckoned as an important reason which obstructs public spending efficiency. *Rajkumar and Swaroop, (2008)* are of the view that absence of good governance in the system cripples down the effect of educational disbursement due to former one seriously impacting the timing of outlay Corruption is also believed to meddle the nexus between spending and educational outcomes. *Suryadarma, (2012)* is of the opinion that corruption impacts both the quantity and quality of spending. It decreases the quantity of actual spending by virtue of corruption charges. Besides, it significantly impacts the subject matter of actual disbursement which severely affects the outcome. MA

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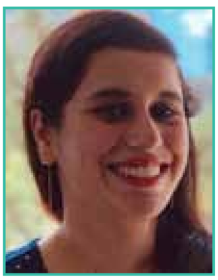
EXPLORING THE EFFECTS OF INNOVATIVE RETAIL TOUCHPOINTS ON CONSUMER BUYING BEHAVIOR IN INDIA: APPLICATION OF THE S-O-R MODEL

Abstract

The retail industry in India has experienced unprecedented changes and growth in the past few years. Retailers need strategies that can improve consumer engagement towards their stores. Consumer engagement towards retailers is often affected by the various touchpoints that these retailers adopt. These touchpoints are the contact-points between a retailer and the consumers and can greatly shape the behavior of consumers. This study examines the effects of new touchpoints on consumer buying behavior. The study draws theoretical guidance from the Stimulus-Organism-Response (SOR) paradigm.



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INTRODUCTION

The retail industry in India has seen unprecedented growth during the last few years. This sector is extremely adaptive in terms of using new technology, ways and methods of reaching their customers. This research uses the Stimulus – Organism – Response model to unveil interesting insights into how Indian consumers think, behave and feel while interacting with innovative retail touchpoints while making a purchase.

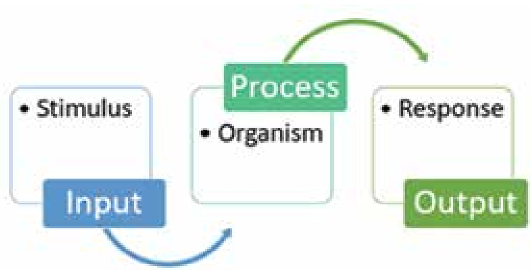
RETAIL TOUCHPOINTS

Today, there are a multitude of channels and media through which retailers can interact with their customers. Even before the advent of the Internet and e-commerce, the number of touchpoints were huge; the advent of the digital media has made these touchpoints even larger in number.

S-O-R FRAMEWORK

The Stimulus – Organism – Response Framework was developed by Mehrabian and Russell (1974) as a part of environmental psychology to study the effects of external stimuli on response.

FIGURE1: S-O-R FRAMEWORK



Stimulus Factors or Retail Touchpoints

In a retail setting, stimuli are all the touchpoints that influence consumer buying. Mehrabian and Russell (1974) evaluated the effects of external stimuli like ambience; lighting and music as well as social stimuli like the friendliness of retail staff on respondents' pleasure and arousal and their willingness to purchase.

Organism or Consumer's Internal Processes

Internal processes consist of internal thoughts and feelings that precede a response. Affective component of consumer evaluation consists of feelings and emotions that determine consumer behavior (pleasure, arousal and dominance). Cognitive component of consumer processes consists of the mental functions or thoughts that determine consumer behavior

Response or Consumer Behavior

Approach response or avoidance response are the two main consumer responses towards retail stimuli.

RESEARCH METHODOLOGY

Research Design

The present study uses a mixed method research design that integrates both qualitative and quantitative research methods. This study aims to understand the effects of innovative retail touchpoints on consumer buying behavior in India.

Research Approach

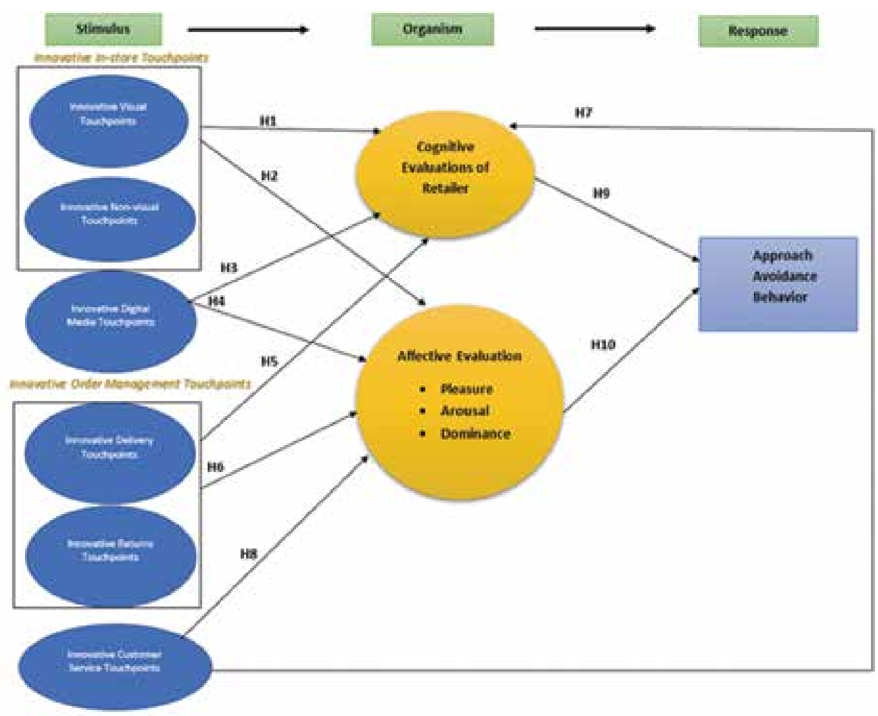
Phase 1 – Qualitative Research

The researcher interviewed store employees across India to find out the retail touchpoints being used by retailers. The retail employees included store managers, regional managers, visual merchandisers, and other employees of various stores.

Phase 2 – Quantitative Research

This phase of research was conducted after analyzing the data collected from Phase 1. The questionnaire was developed, pre-tested and refined before it was sent to the customers for final data collection. This phase of this study focused on understanding consumer behavior towards retail touchpoints that were identified in the first phase of the research. Data was collected electronically from these respondents who had agreed to participate in the study and represents the opinions gathered from shoppers of organized retail outlets only.

FIGURE 2: CONCEPTUAL MODEL



The relationships between retail touchpoints, organism's pleasure, arousal and dominance states and the behavioral responses are studied in this research through the following hypotheses:

H1: Positive view of innovative in-store retail touchpoints have a positive impact on cognitive evaluation of the retailer.

H2: Positive view of innovative in-store retail touchpoints have a positive impact on affective evaluation.

H3: Positive view of innovative digital media touchpoints have a positive impact on cognitive evaluation of the retailer.

H4: Positive view of innovative digital media touchpoints have a positive impact on affective evaluation.

H5: Positive view of innovative order management touchpoints have a positive impact on cognitive evaluation of the retailer .

H6: Positive view of innovative order management touchpoints have a positive impact on affective evaluation.

H7: Positive view of innovative customer service touchpoints have a positive impact on cognitive evaluations of the retailer.

H8: Positive view of innovative customer service touchpoints have a positive impact on affective evaluation.

H9: Positive affective evaluations will lead to positive consumer behavior.

H10: Positive cognitive evaluations will lead to positive consumer behavior.

RESULTS AND FINDINGS

Identifying Innovative Retail Touchpoints in India that Affect Consumer Evaluation Towards Retailers

To identify the various innovative retail touchpoints popular in India, the researcher relied upon literature review, qualitative study by interviewing industry experts and quantitative analysis. After validating the factors by interviewing the industry experts, an exploratory factor analysis was conducted to identify the extracted factors. The extracted constructs or innovative retail touchpoints were as under:

TABLE 1: INNOVATIVE RETAIL TOUCHPOINT CATEGORIES

Sr. No.	Innovative Retail Touchpoint
1.	Innovative in-store retail touchpoints
2.	Innovative digital media touchpoints
3.	Innovative order fulfillment and returns touchpoints
4.	Innovative customer service touchpoints

Effect of Innovative In-Store Touchpoints on Cognitive Evaluations

Multiple regression analysis was run to analyze the effect of the identified innovative retail touchpoints on cognitive evaluations of consumers. Multiple regression analysis is a technique which is most widely used to analyze relationships between a single dependent variable and a set of independent variables (*Hair et al., 1998).*

TABLE 2: IMPACT OF INNOVATIVE IN-STORE RETAIL TOUCHPOINTS ON COGNITIVE EVALUATIONS

R	R^2	Adjusted R^2	Standard Error of Estimate	F Value	Significance
0.350	0.122	0.190	0.54414	58.192	0.000

Since the F value is 58.192 and p-value is 0.000, we can say that innovative in-store retail touchpoints jointly have a statistically significant relationship with cognitive evaluations. Moreover, innovative in-store touchpoints account for 12.2 per cent variance in the dependent variable cognitive evaluations.

Besides combined effect of innovative in-store retail touchpoints, individual elements of visual touchpoints and non-visual touchpoints were also analyzed. Beta value shows that innovative non-visual touchpoints have the greatest influence on cognitive evaluations.

Effect of Innovative In-Store Touchpoints on Affective Evaluation

For examining the relationship between innovative in-store touchpoints and affective evaluations, simple regression analysis was used with the dimensions of in-store touchpoints as independent variables and pleasure, arousal and dominance respectively as the dependent variable. For pleasure, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. The R^2 value is 0.196 indicating that innovative in-store touchpoints account for 19.6 per cent variance in the dependent variable pleasure. Another regression analysis was run to determine if there is a statistically significant relationship between innovative in-store touchpoints and arousal. ANOVA value was considered and since it is less than 0.05, the model is considered a good fit. The Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. Innovative in-store touchpoints account for 16.1per cent variance in the dependent variable arousal. Third regression analysis was used to study the relationship between innovative in-store touchpoints on dominance. The Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. The R^2 value is 0.067. It means that innovative in-store touchpoints account for 6.7 per cent variance in the dependent variable dominance.

Effect of Innovative Digital Media Touchpoints on Cognitive Evaluations

For examining the relationship between innovative digital media touchpoints and cognitive evaluations, a simple regression analysis was used with the combined dimensions of innovative digital media touchpoints entered as the independent variable and pleasure as the dependent variable. The R^2 value was 0.188 meaning that innovative digital media touchpoints account for 18.8 per cent variance in cognitive evaluations.

Effect of Innovative Digital Media Touchpoints on Pleasure, Arousal and Dominance

A simple regression analysis was used with the dimensions of digital media touchpoints as independent variables and pleasure, arousal and dominance respectively as the dependent variable. For pleasure, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. For arousal, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. For dominance, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant.

Effect of Innovative Order Management Touchpoints on Cognitive Evaluations

Multiple regression analysis was used to analyze the effect of the innovative order management touchpoints on cognitive evaluations of consumers. Strong relationship between innovative order management (order delivery and order returns) touchpoints and consumer's cognitive evaluations towards a retailer was found.

Effect of Innovative Order Management Touchpoints on Pleasure, Arousal and Dominance

Simple regression analysis was used with the dimensions of order management touchpoints as independent variables and pleasure, arousal and dominance as the dependent variable respectively. For pleasure, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. The R^2 value is 0.302. It means that innovative order management touchpoints account for 30.2 per cent variance in the dependent variable pleasure. For arousal, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. The R^2 value is 0.098 meaning that innovative order management touchpoints account for 9.8 per cent variance in the dependent variable arousal. For dominance, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. The R^2 value is 0.040. It means that innovative order management touchpoints account for 4 per cent variance in the dependent variable dominance.

Effect of Innovative Customer Service Touchpoints on Cognitive Evaluations

For examining the relationship between innovative customer service touchpoints and cognitive evaluations, a simple regression analysis was used with the dimensions of customer service touchpoints as independent variables and cognitive evaluations as the dependent variable. Innovative customer service touchpoints were found to account for 24.4 per cent variance in the dependent variable cognitive evaluations.

Effect of Innovative Customer Service Touchpoints on Pleasure, Arousal and Dominance

Simple regression analysis was used with the dimensions of customer service touchpoints as independent variables and pleasure, arousal and dominance as the dependent variable respectively. For pleasure, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. For arousal, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant. For dominance, the Sig value was 0.000 which is less than 0.05, indicating that the variables of the model are significant.

Effect of Affective Evaluations on Consumer Behavior

To test these hypotheses, multiple linear regression was conducted with pleasure, arousal and dominance entered as independent variables and consumer behavior as the dependent variable.

TABLE 3 : RESULT OF REGRESSION ANALYSIS TO STUDY THE EFFECT OF AFFECTIVE EVALUATION ON CONSUMER BEHAVIOR

	Standardised ß	sig
Arousal	0.09	0.00
Pleasure	0.70	0.00
Dominance	-0.00	0.95
R^2	0.54	
F	112.77	0.00
df	3	

It is evident from the above analysis that affective evaluations explained 54 per cent of variations in consumer behavior ($R^2 = 0.54$, $p < 0.05$). Arousal is shown to have $ß = 0.09$ and $p < 0.05$ and Pleasure has a $ß = 0.70$ and $p < 0.05$. This means that arousal and pleasure have a positive effect on consumer behavior while dominance is shown to have no significant effect on consumer behavior.

Effect of Cognitive Evaluations on Consumer Behavior

Simple regression analysis has been conducted to analyze the effect of cognitive evaluations on consumer behavior. Cognitive evaluations were shown to influence buyer behavior.

CONCLUSION

There have been numerous changes in the retail industry over the past few years. In developing economies like India, organized retailers are always on the lookout to adopt new in-store, technology, process as well as human touchpoints to attract more consumers. This study has identified the innovative touchpoints that the retailers in India are adopting with the help of qualitative employee interviews.

Although past studies have shown that consumer perceptions about the price and merchandise at a retail store are often influenced by the design of the store (*Baker, 1994*), the current study has not revealed a similar relationship between innovative visual touchpoints and consumer cognitions. This could be due to the reason that this current study did not focus on only one kind of store but studied a mix of all kinds of stores – apparel, general merchandise, fashion retailers etc.

While studying the impact of non-visual touchpoints on consumer cognitions, results indicate that non-visual touchpoints have positive effects on consumer cognitive evaluations. This means that consumers often evaluate retailers positively based on non-visual touchpoints like provision of in-store Wi-Fi, eco-friendly store, sustainable merchandise and store music. Consumers often form positive opinions about the retailer based on these non-visual touchpoints.

An interesting conclusion drawn from this study is the high level of acceptability of new technology by the consumers. Although retail industry has always been in the forefront of adapting new technology, the COVID-19 pandemic forced the industry to change and become more digitally advanced. Retail industry globally has witnessed an increased use of digital media touchpoints by like websites, blogs, online advertising, social media, emails, online discounts/ promotions, online reviews and influencer's videos and posts. Indian retail industry is no different than its global counterparts. The use of innovative digital media touchpoints has been on a rise in India as well. The current study shows that there is a significant relationship between the use of innovative digital media touchpoints and consumer cognitive evaluations of retailers.

In India, concepts like home delivery, quick delivery became extremely popular. This study hypothesized that innovative order delivery touchpoints like and returns

In a retail setting, stimuli are all the touchpoints that influence consumer buying

management touchpoints have significant impact on consumer cognitive evaluation. Upon analysis of the data, it was evident that these two touchpoints have significant relation with cognitive evaluation. The current study also reveals a positive relationship between cognitive evaluations towards innovative touchpoints and affective evaluation towards the retailer. This implies that the opinions a consumer has towards a retailer will in turn affect their emotions towards the retailer. This strongly supports the hypotheses that cognitive and affective evaluations have significant positive effects on approach/ avoidance behavior. This means that if consumers view the innovative retail touchpoints to be appealing, they will have a positive opinion about the retailer and will lead to approach behavior. MA

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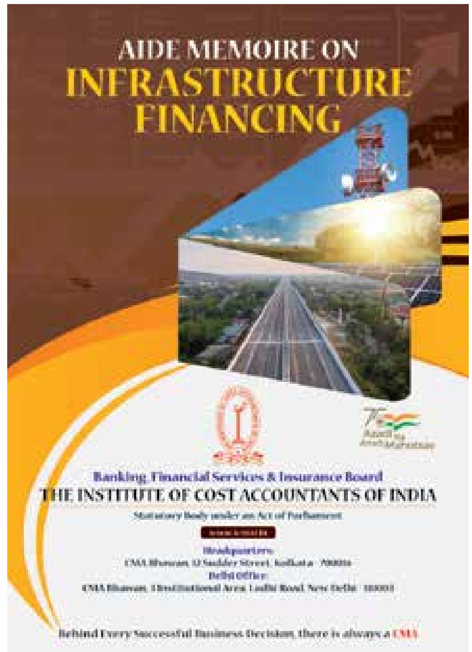
Aide Memoire on
INFRASTRUCTURE FINANCING

Infrastructure is the backbone of any economy. It is a well recognised fact that Infrastructure has a multiplier effect on the holistic development and rapid sustainable growth.

A Robust Infrastructure Finance mechanism therefore assumes utmost importance in the entire Eco system.



Synopsis-Salient Features of the book

- A one stop, single reference point, in the niche area of Infrastructure Finance.
- The book covers the basic theoretical concepts as also the real nitty gritty of processes & procedures and nuances involved in Infrastructure Finance with all the relevant topics which inter include the following:-
    - Definition of Infrastructure sector-Harmonised master list of infrastructure sub -sectors, as notified by Department of Economic Affairs, Ministry of Finance, Definition under Companies Act 2013 and under Income Tax Act 1961.
    - Elements of Financing Infrastructure.
    - Types of Public Private Partnership (PPP) models.
    - Formation of the Special Purpose Vehicle (SPV) and Key project documents/structure for Infrastructure Finance.
    - Financing mechanism consortium/syndication.
    - Credit appraisal process-covering management appraisal, economic appraisal, marketing appraisal, technical appraisal and Financial appraisal.
    - In depth analysis of cost of project and means of finance with specific reference to Infrastructure projects, including interest during construction (IDC), Debt Service Reserve Account (DSRA) etc.
    - Key performance indicators including financial indicators and non financial indicators. This includes detailed discussion on all financial ratios for long term funding like DSCR, IRR, BEP and concepts like ESG compliances.
    - Detailed discussion on the intricacies involved in appraisal and sanction, including various aspects of concession agreement, Power Purchase agreement, Escrow agreement, Fuel supply agreement Inter creditors agreement etc
    - Assessment of various Risks involved in infrastructure finance like sponsor risk , construction risk,market risk, financial risk etc and mitigation thereof.
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NEWS FROM THE INSTITUTE

EASTERN INDIA REGIONAL COUNCIL

A Continuing Education Programme on "Sections applicable for TDS on Transactions under the Income Tax Act, 1961" was organized under the initiative of Women Empowerment Committee on 4th November, 2022 at EIRC Premises. CMA Biswarup Basu, Immediate Past President ICAI, CMA Chittaranjan Chattopadhyay, CCM-ICAI, CMA Harijiban Banerjee, Former President ICAI, CMA Amal Kumar Das Former President ICAI, CMA Pallab Bhattacharya, Vice-Chairman, EIRC were present on the occasion and addressed the members. CMA Arundhati Basu, Chairperson, Women Empowerment Committee welcomed the members. All the Former Presidents congratulated the Committee Chairperson for choosing an appropriate topic which would create value for the Members. CMA Ashis Banerjee Former Chairman, EIRC was the Keynote Speaker. CMA Shymalendu Bhattacharya, Addl Assistant Director (Trg) (Retd) Direct Taxes Regional Training Institute, GOI, CMA Nobina Basu, Practicing Cost Accountant and CMA Madhurima Das, Practicing Cost Accountant were the speakers. There was an overwhelming response and the participants appreciated the programme.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA BHUBANESWAR CHAPTER

The Chapter conducted a Career Awareness Programme at Ganesh Commerce Point Pvt Ltd., Bhubaneswar on 29.10.2022. CMA Santanu Kumar Rout, Chairman of the Chapter highlighted the career prospects in CMA course, course curriculum and clarified the queries raised by the attending students of +2 and + 3 Commerce students. Shri H K Biswal, AAO of the Chapter also clarified some of the queries.

The Chapter organized another Career Awareness Programme at Sivananda Centenary Boys' Higher Secondary School on 31.10.2022. CMA Surya Narayan Tripathy, Secretary of the Chapter highlighted the career prospects of the CMA course, course curriculum and clarified the queries of the students. Some of the queries were clarified by Shri H K Biswal, AAO of the Chapter. CMA Niranjan Sahoo, Past Chairman of the Chapter was also present on the occasion.

Yet another Career Awareness Programme was organized at Commerce Hub Pvt Ltd. Bhubaneswar on 02.11.2022 when CMA Santanu Kumar Rout, Chairman of the Chapter highlighted the career prospects of the CMA course, course curriculum and clarified the queries raised by the participating students. Shri H K Biswal, AAO of the Chapter also clarified few queries.

A seminar cum Career Awareness Programme was held on 04.11.2022 in association with the Department of Commerce, Sadhugoureswar College, Kanikapada, Jajpur at the College premises. Around 150 students pursuing +2 and +3 Commerce along with commerce faculties attended the programme. The theme of the seminar was "Role of Accounting Standards in Financial Disclosure". CMA Surya Narayan Tripathy, Secretary of the Chapter spoke on the topic as Resource Person. Shri H K Biswal, AAO of the Chapter highlighted the career prospects of CMA Course, course curriculum and replied to the queries of the Students. Shri Daitari Rout, Principal, Sadhugoureswar College graced the occasion as Chief Guest. During his talk, he suggested conducting such programmes in regular intervals for the benefit of commerce students. Dr Sudhansu Kumar Das, HoD Commerce, S G College delivered the welcome address while Shri Gajendra Kumar Das, Faculty in Commerce gave a brief introduction of the guests. Shri Ganesh Chandra Panda, Faculty in Commerce delivered the keynote address and Miss Dharitri Samantra, Faculty in Commerce proposed a vote of thanks. With the collective effort, the programme was a grand success and some reputed print media had given good coverage of the programme.

A similar Career Awareness Programme was organized at Commerce Point, Jajpur Town, Jajpur on 04.11.2022. CMA Surya Narayan Tripathy, Secretary of the Chapter highlighted the career prospects of CMA course and Shri H K Biswal,

AAO of the Chapter highlighted the course curriculum.

The Chapter organized a WEBINT on "ITC and New Challenges under GST" on 12.11.2022. CMA Anil Sharma, Practicing Cost Accountant, Chandigarh spoke on the topic in detail as Resource Person. CMA Saktidhar Singh, Chairman, PD Committee and Past Chairman of the Chapter delivered the keynote address, CMA Santanu Kumar Rout, Chairman of the Chapter delivered the welcome address and CMA Surya Narayan Tripathy, Secretary of the Chapter proposed a vote of thanks.

A Seminar cum Career Awareness Programme was held at Adasapur on 19.11.2022. The theme of the Seminar was "Create Your Own Identity as a Professional". CMA Surya Narayan Tripathy, Secretary of the Chapter was the Chief Guest and highlighted the career prospects of CMA Course. Shri H K Biswal, AAO of the Chapter highlighted the course curriculum .Several young CMAs like Sanjeeb Behera, Asst Manager (F), IBM , Saroj Kumar Panigrahi, Sr. Professional (F), IBM, Gyana Ranjan Sahoo, Asst. Manager (F), WIPRO Chinmaya Routray, Sr. Accounts Officer, GENPACT, Malaya Kumar Behera, Practicing Cost Accountant Lingaraj Patra, working in South Africa briefly spoke about the career prospects of CMA Course in State PSUs, Central PSUs, private sector, areas of practice and overseas opportunities.

A career awareness programme was held in association with School of Management, Centurion University of Management and Technology, Bhubaneswar Campus on 19.11.2022. CMA Santanu Kumar Rout, Chairman of the Chapter guided those pursuing BBA and + 3 Commerce Students of the institution, highlighted the career prospects of CMA Course and course curriculum. He also clarified the queries raised by the participants.

NORTHERN INDIA REGIONAL COUNCIL

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA JAIPUR CHAPTER

At the Completion of the 12 days Pre-placement orientation program for students who qualified in Final examination held in June 2022, a valedictory session was organised at the Chapter on 22nd October 2022. In this session Chief Guest, Dr. Saurabh Sharma, Associate Professor & Head of Commerce Department distributed certificates to more than 80 budding CMAs. In his address he emphasised on confidence, courage and consistency to succeed in life. On this occasion all committee members, past chairman CMA Swapnil Bhandari and CMA S.L. Swami motivated the participants towards achievement of goals. The program was conducted by CMA Purnima Goyal, Treasurer of the Chapter. At the end of the programme CMA Dr. Deepak Kumar Khandelwal, Secretary thanked all the participants.

Shri Saurabh Bansal, Director of Fabulous School, Kuchaman City (Nagaur) visited Jaipur Chapter on 14th November 2022 along with 60 students of Class 11 and 12 and several faculty members and staff to make the students aware about the CMA course. Accordingly, a CMA career counselling program was organised at the Chapter for them whereat details of CMA course and its future prospects were explained in detail by CMA Harendra Kumar Pareek, Vice-Chairman and CMA P.D. Agarwal, Director of Coaching.

SOUTHERN INDIA REGIONAL COUNCIL

Press Meet was arranged by SIRC on 3rd November 2022 at 11 am at the Chennai Press Club, Government of Tamil Nadu Omandurar Estate to appraise the press about the Regional CMA Convention [RCC 2022]. The Press meet was addressed by CMA P. Raju Iyer, President of the Institute, CMA Sankar P. Panicker, Chairman Southern India Regional Council of the Institute, CMA Vijay Kiran Agastya, Secretary SIRC.

The Institute of Cost Accountants of India SIRC organised its Annual Prestigious Mega Event of Regional CMA Convention 2022 on 4th and 5th November 2022 at Chennai. The Theme of the Convention was "Changes in the Business Landscape: Future Ready Finance Professionals". CMA P. Raju Iyer, President of the Institute was the Chief Guest. The valedictory session was graced by Thiru. R.N. Ravi, Hon'ble Governor of Tamil Nadu. More than 400 members, industry representatives, and Government officials participated in this Mega Event. President of the Institute Inaugurated the Convention by lighting the traditional lamp with other Dignitaries. CMA Sankar P. Panicker, Chairman SIRC rendered Welcome address. The Theme of the Convention was briefed by CMA Vijay Kiran Agastya, Secretary SIRC. Inaugural Address was delivered by Padma Shree CA T. N. Manoharan, Chairman, IDBI Bank and Plenary Address by CMA D. Sundaram, Vice Chairman & Managing Director, TVS Capital Funds Private Limited. Special awards were given to CMA A. Krishnan, Apollo Hospitals, CMA Mahabharathi, IAS, CMA Dr. S. Kumararajan, Chairman, Madurai Chapter. As part of the Convention on the Evening of Day -1 Proceedings, 'Cultural Events' were hosted by the Students of Shri Shankarlal Shasun Jain College for Women covering Light music, Bharatha Natiyam, Instrument playing and different dance forms of South India. There were inaugural and plenary sessions followed by the Valedictory Function. The function held on 5th November, 2022 graced by Thiru. R.N. Ravi, Hon'ble Governor of Tamil Nadu. In his speech, 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. CMA Sankar P. Panicker rendered the welcome address. CMA A.N. Raman, Former SAFA President summed up the entire proceedings of the two-day Convention. During the Function, Hon'ble Governor of Tamil Nadu released the Souvenir brought out in connection with the Convention. The Convention ended with a Vote of Thanks proposed by CMA Vijay Kiran Agastya, Secretary-SIRC, followed by National Anthem. S. Ganapathisubramanian Memorial Fund Committee organised its 17th S. Ganapathisubramanian Memorial Lecture on 5th November,2022 at the RCC 2022 Convention Venue. The Memorial Lecture addressed by Shri. P. Deepak, MD & CEO, Nelcast Limited, on the Topic "Manufacturing in Uncertain Times – Cost Challenges Facing the Industry".

Members in Industry & Placement Committee in association with Southern India Regional Council organised CMA Campus Placement program 2022 (Phase 1) for qualified Cost Accountants of June 2022 term from 24-26th November 2022 in which Corporates like Ford Motors Pvt. Ltd. NLC (India) Ltd. BNY Mellon, Vedanta Ltd. Reliance Limited Jio, ITI Ltd. BEML Ltd. Kalpataru Power Transmission Ltd. Prism Johnson Ltd. ITC Limited Foods Division, Agri. Business, Packaging & Printing Division and Hotels Division, ABB Ltd. and RSM Astute Consulting Pvt. Ltd. participated.

Pre Placement Orientation Programme was also conducted for the candidates from 12th to 22nd October 2022, to impart all the required 'Skill Sets' for facing the interview well and grab the job opportunities offered by the well-known Corporates with high pay package.

Sri Ramachandra Faculty of Management Sciences, SRIHER launched the Certificate and Diploma Programme in Health Care Finance jointly with the Institute. The programme was held on 3rd November 2022 at the University Campus. The event was presided by Dr. Mahesh Vakamudi, Dean Faculties of the University and stressed the importance of Differential Costing in Hospitals and role of CMA's in delivering the value added to the health care industry. Shri. Ravisankar, Director, Finance lauded the Institute for its efforts in the launch of Joint Programme in Healthcare Finance, which is the first of its kind in the country. CMA P. Raju Iyer, President along with CMA M. Gopalakrishnan, Past President, CMA Sankar P. Panicker, Chairman SIRC, CMA Vijay Kiran Agastya, Secretary – SIRC launched the course and interacted with the participants on the Health care costing and pricing. The event was co-ordinated by Dr. A. S. Purnima, Faculty of Management Sciences and CMA Rakesh Shankar Ravisankar, Member IAASB.

Crash Course in Goods and Services Tax [GST] for 53 students was organized at the New College [Autonomous], Chennai from 30-10-2022 to 18-11-2022. The valedictory function and Certificate distribution was organized on 19-11-2022. The event was presided by Janab Elias Sait, Secretary of The New College [Autonomous] and he threw light on the importance of Taxation laws in the development of the nation and role to be played by the students in their career. The following officials of the college graced the occasion and delivered a special address and felicitation. Dr. Basheer Ahmed, Principal, Dr. Mohammed Akmal, Dean Commerce, Dr. Syeed Rafiq Ahmed, Head of the Department

of Commerce, Dr Thameem Sherief, Prof. Mohammed Yunus, Dr. S. Thothadri, Prof. Syed Ahmed Jalaludeen, Dr N. O. Ameen, Faculty Members of the Department of Commerce. CMA P. Raju Iyer, President and CMA Sankar P. Panicker Chairman SIRC applauded the College for the Joint Initiatives and suggested to partner with the Institute for Satellite Centre of SIRC to benefit the students and community at large. Shri. Srivatsan, Department of Goods and Services Tax, Ministry of Finance was the Guest of honour and he shared his experience with the students and the path forward for them. Students shared their feedback with the President that the Course benefitted them to gain practical exposure. CMA Rakesh Shankar Ravisankar proposed to the college for the Introduction of Value-Added Courses for the School of Architecture and the college welcomed the same. CMA Sankar P Panicker – Chairman – SIRC, CMA Rajesh Sai Iyer – Treasurer – SIRC and CMA Rakesh Shankar Ravisankar, Member - IAASB visited the college on 25-11-2022 and initiated the proposal for the Value Added Course / Workshop for the School of Architecture and had a hour long discussion with the Principal - Prof. Mohamed Khalid M.R, Dean - Dr. Monsingh David Devadas, Dr. Navara A and Dr. Priya Sasidharan in the presence of Dr. Syed Rafeeq Ahmed – HOD Commerce and Dr S. Thothadri, Department of Commerce. Later the Team visited the Central Library of the College and discussions to initiate the Satellite Centre was set in motion by the Chairman.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA BENGALURU CHAPTER

The Chapter organized a Professional Development Programme on the "Future of Working Systems in the Changing Scenario" at the Chapter premises on 22.10.2022. H.S. Shama Sundar, HR Expert and Strategic Business Growth Advisor, CMA Raghavendra B. K. Secretary BCCA, CMA Sreepada H R, PD Chairman BCCA, CMA Vishwanath Bhat, Vice Chairman SIRC were the key speakers on the occasion.

A 11 Days Pre-Placement Orientation Programme on "Soft Skills, Interview Skills, Group Discussion, CV Writing & Professional Email Writing" was organized by the Chapter on October 20, 2022. Mrs.Keerthana Soft Skill Trainer, Mission Catalyst was the main speaker.

The Chapter organized a talk on "Job Opportunities for CMA's IBC & Valuation" at its premises. CMA Hemanth Kulkarni, Practicing Cost Accountant, CMA Subramanya Shivam, Practicing Cost Accountant, CMA G N Venkataraman, Former President ICAI were the speakers.

On 22.10.2022 the Chapter organized a programme on "Ind- AS Convergence of Indian Accounting & IFRS". CMA Vinayak Pai, Practicing Cost Accountant was the speaker.

On 23.10.2022 the Chapter organized a programme on "Forensic Audit & Valedictory Session – Certification Distribution". CA Satish M. Practicing Chartered Accountant, CMA Satish R, Chairman BCCA, CMA Raghavendra B K Secretary BCCA, CMA Vijayalakshmi K R, Chairperson Coaching BCCA, CMA Pranabandhu Dwibedy, Treasurer BCCA, CMA Vishwanath Bhat, Vice Chairman SIRC, CMA G N Venkataraman, Former President ICAI were the speakers.

On 16 November, 2022 the Chapter organized a career counselling programme at PES College, Hanumanthnagar, Bangalore when CMA Satish R. Chairman BCCA, CMA Raghavendra B.K, Secretary BCCA, CMA Vijayalakshmi K R., Coaching Chairperson BCCA, CMA Pranabandhu Dwibedy, Treasurer BCCA, CMA Kumar H.N., Member, CMA G N Venkatraman, Former President ICAI were the key speakers.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA HYDERABAD CHAPTER

On 02.10.2022, the Chapter organized a Professional Development programme on "Nuances of Valuation of Companies Due Diligence, Insolvency Profession, Power BI – Effective usage in MIS, Inter play of GST & IBC". CMA P Raju Iyer, President-ICAI, CMA Vijender Sharma, Vice President-ICAI, CMA (Dr.) A.S. Durga Prasad, Past President-ICAI, CMA (Dr.) K.Ch.A.V.S.N. Murthy, CCM-ICAI, CMA Sankar P. Panicker, Chairman, SIRC ICAI, CMA Vijay Kiran Agastya, Secretary, SIRC of ICAI graced the occasion as guests of honour and elevated the stature of programme with their presence. CMA (Dr.) V. Gopalan, Member, IAASB, CMA K.V.N. Lavanya, Practising Cost Accountant, CA Venkata Prasad-Practising Cost Accountant, CA U. Saran Kumar, Practising Cost Accountant were the speakers at the various technical sessions. There were so many takeaways for the participants from the speakers in the areas of practice.

The Chapter conducted a Pre-Placement Orientation Programme in physical mode from 12th October 2022 to 23rd October 2022 for CMA Qualified candidates of June 2022 batch. CMA Vijay Kiran Agastya, Secretary of ICAI was Chief guest for Inaugural session. CMA (Dr.) K.Ch.A.V.S.N. Murthy

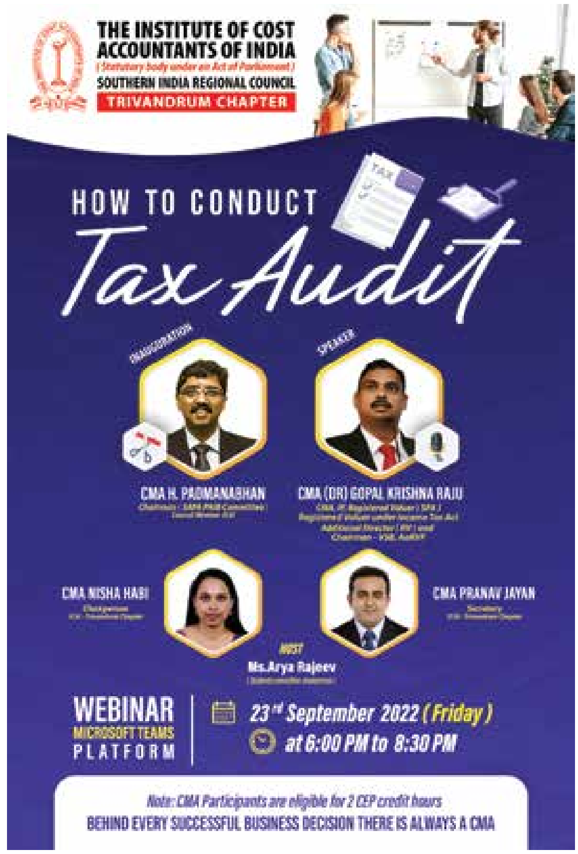
CCM, CMA Debasish Mitra CCM, CMA (Dr.) A.S. Durga Prasad, Past President of ICAI graced the valedictory sessions. Their messages for young professionals were inspiring.

The Chapter organised a virtual session on "Practical Insights on FEMA" on 30.10.2022. CMA R. Koushik Mukhesh clearly explained important aspects relating to the femoral transaction adjudications and external commercial borrowings, various laws etc. CMA Dr. K.Ch.A.V.S.N. Murthy, CCM was the Chief Guest and CMA Vijay Kiran Agastya, Secretary, SIRC of ICAI was a special invitee.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA TRIVANDRUM CHAPTER

The Chapter conducted a webinar on the subject "How to conduct Tax Audit" in Microsoft Teams Platform on 23rd September 2022 from 6 pm to 8.30 pm. The session was inaugurated by CMA H Padmanabhan, Central Council Member, Chairman SAFA PAIB Committee, ICAI and the session was handled by CMA CA (Dr) Gopal Krishna Raju, CA, IP, Registered Valuer (SFA), Registered Valuer under Income Tax Act, Additional Director (RV), and Chairman (VSB), AaRVF. The meeting was chaired by CMA Nisha Habi, Chairperson of the Chapter. CMA Pranav Jayan Secretary and CMA Pramode Chandran P G, Treasurer of the Chapter were also present in the webinar.

The Chapter conducted a similar webinar on "Practical approach to Costing in Healthcare Sector" in Microsoft Teams Platform on 1st October 2022 from 6 pm to 8.30 pm. The session was inaugurated by CMA H Padmanabhan, Central Council Member, Chairman SAFA PAIB Committee, ICAI and the session was handled by CMA Jyothi Satish, Past



Chairperson, SIRC, Independent Director. CMA Vijender

Sharma, Vice President, ICAI and CMA (Dr.) K.Ch.A.V.S.N Murthy Central Council Member were the Guests of honour and addressed the gathering. The meeting was chaired by CMA Nisha Habi, Chairperson of the Chapter. CMA Pranav Jayan Secretary, CMA Pramode Chandran P G, Treasurer were also present in the webinar.

The Chapter celebrated Gandhi Jayanthi on 2nd October 2022 at its premises. The function was inaugurated by CMA Prasanth S, MC Member of the Chapter. CMA Pranav Jayan Secretary, other Members of the Chapter, Faculty members staff and students participated in the function and made it a memorable one.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA COCHIN CHAPTER

The Chapter conducted a one-day seminar on Social Stock Exchange, ESG & BRSR, jointly with Corporate Laws Committee of ICAI (Cost) SIRC of ICAI (Cost), ICAI (CMA) Cochin Chapter and ICSI Kochi Chapter.

CMA CS Sivakumar P. Member, Corporate Laws Committee, presenting memento to the Chief Guest, Hon. Justice Gopinath P. Judge, High Court of Kerala on the occasion of the one day Joint Professional Development Programme, organised by the Corporate Laws Committee of ICAI (Cost) SIRC of ICAI (Cost), Cochin Chapter of ICAI (Cost) and ICSI Kochi Chapter at Cochin on October 22, 2022, on the theme: "Powering towards inclusive and sustainable growth- Role of Professionals".

Seen from the left:

CS Mithun B. Shenoy, Chairman, ICSI Kochi Chapter, CMA Venkateswaran Ramakrishnan, and CMA T. V. Thomas, Vice Chairman, ICAI (CMA) Cochin Chapter.

CMA. Rakesh Bhalla, Central Council Member, presenting a memento to the Speaker, Dr. Ranjith Krishnan, Assistant Professor, Head Academic Programme Unit, National Institute of Securities Market, Mumbai on the occasion of the One day Joint Professional Development Programme, organised by the Corporate Laws Committee of ICAI (Cost) SIRC of ICAI (Cost), Cochin Chapter Of ICAI (Cost) and ICSI Kochi Chapter at Cochin on October 22, 2022, on the theme: "Powering towards inclusive and sustainable growth- Role of Professionals"

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA THRISSUR CHAPTER

The Chapter conducted a seminar on Mutual Funds – Myths & Facts on 13th November, 2022. CMA Praveen Kumar, Chairman of the Chapter delivered the welcome address. The resource person was Manoj T Neelakantan, Certified Trainer, SEBI. The vote of thanks was proposed by CMA Siddharth A, Member of Chapter.

The chapter conducted a seminar on "Opportunities to CMAs in Colleges and Universities as per new UGC Guidelines" on 19th November, 2022. CMA Arun K Ratheesh, Member of the Chapter delivered the welcome address. The resource person was CMA Sivakumar A, Assistant Professor of Commerce. The vote of thanks was proposed by CMA Ardra Ajith, Member of the Chapter.

The Chapter conducted a seminar on "TDS and TCS Returns" on 12th November, 2022. CMA Praveen Kumar, Chairman of the Chapter delivered the welcome address. The resource person was CMA Mejo K M. Internal Auditor, VKC Group. The Vote of Thanks was proposed by CMA Syamaprasad, Member of the Chapter.

WESTERN INDIA REGIONAL COUNCIL

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA PUNE CHAPTER

The inaugural session of the Pre-Placement Orientation Programme for CMA Qualified students of June 2022 Batch was conducted on 11th October 2022 from 11:00 am to 6:00 pm through Online mode. Offline session for this PPOTP was conducted from 31st October to 10th November 2022 at CMA Bhawan, Karvenagar. In the first session CMA Chaitanya Mohrir, RCM, WIRC of ICAI, CMA Nilesh Kekan, Treasurer, CMA Rahul Chincholkar, Managing Committee Member of ICAI-Pune Chapter were present. CMA Nilesh Kekan, Treasurer of the Chapter welcomed and introduced the Guest to the participants. The Faculty for the first session was CMA Raghvendra Chilveri. CMA Chaitanya Mohrir, RCM, WIRC of ICAI congratulated the newly qualified CMA students and offered his best wishes for future prospects. Renowned faculties comprising of CMDs, CFOs, CEOs, HR Heads, Director Finance, General Managers, from various industry houses and organizations guided the students. The valedictory session was conducted on 10th November 2022.CMA (Dr.) Sanjay R. Bhargave, Advisor, ICAI-Pune Chapter, CMA Meena Vaidya, Advisor, ICAI-Pune Chapter, CMA Abhay Deodhar, Managing Committee Member, CMA Nilesh Kekan, Treasurer, CMA Rahul Chincholkar, Managing Committee Member ICAI-Pune Chapter were present at this session. CMA Abhay Deodhar felicitated CMA (Dr.) Sanjay Bhargave, Chief Guest for the programme. CMA Nilesh Kekan felicitated CMA Meena Vaidya, Advisor, ICAI-Pune Chapter. The welcome address was delivered by CMA Meena Vaidya. She congratulated the participants for their success and told them to be ready for future endeavours. CMA Rahul Chincholkar, Managing Committee Member ICAI-Pune Chapter congratulated the newly qualified CMA students and advised them to be prepared for interviews. He also explained the students the practice the opportunities and advised them to stay connected with the Institute and attend the CEP programs for updating their knowledge. CMA Abhay Deodhar guided the students to keep learning for acquiring more knowledge from various fields. CMA (Dr.) Sanjay R. Bhargave in his address congratulated the newly qualified CMA students and explained how to acquire knowledge. He talked about performance which is very important, emphasised the need for updating their knowledge and the importance of vocabulary improvement. He also guided the students for the preparation of CV which should be simple and short and the importance of oral and written communication.

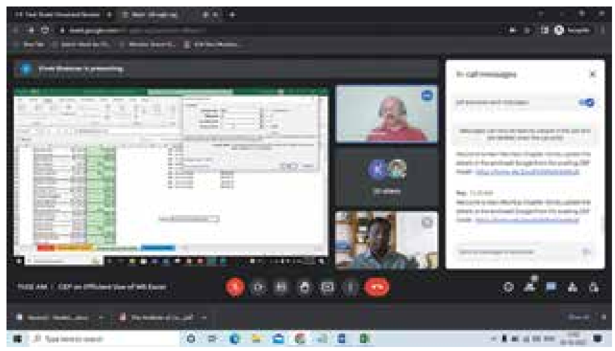
The Chapter organised a CEP on the subject "Corporate Governance and Risk Management" on 18th November 2022 at CMA Bhawan, Karvenagar. CMA Pradeep Pathak, Practicing Cost Accountants was Speaker for the programme. CMA Nilesh Kekan, Treasurer of the Chapter welcomed and introduced the speaker to the participants. CMA Prasad Joshi, Chairman of the Chapter felicitated the speaker CMA Pradeep Pathak. CMA Pradeep Pathak guided the participants on the subject Corporate Governance and Risk Management. CMA Shrikant Ippalpalli, Chairman, P D Committee of the Chapter proposed a vote of thanks.

The Students' Day programme was celebrated by the Chapter on 20th November 2022 at CMA Bhawan, Karvenagar for successful students of the June 2022 session at Pune Centre. Chief Guests for the program were CMA Dr. Narhar Nimkar, Indirect Taxes Practitioner. CMA Sujata Budhakar was the Guest of Honour, CMA Nitin Chaturbhuj was the key speaker. Other dignitaries were CMA Chaitanya Mohrir, RCM, WIRC of ICAI, CMA Prasad Joshi, Chairman, ICAI-Pune Chapter, CMA Nagesh Bhagane, Secretary, CMA Nilesh Kekan, Treasurer, ICAI-Pune Chapter, CMA Abhay Deodhar, managing committee member, ICAI-Pune Chapter, CMA Amit Shahane Practising Cost Accountant. The welcome address was given by CMA Nilesh Kekan, Treasurer & Chairman-Students Co-ordination Committee, ICAI-Pune Chapter. The programme was inaugurated with Sarasvati puja and lighting of the lamp by the hands of Chief Guest and dignitaries on the dais and singing of the Institute's anthem. CMA Nagesh Bhagane, Secretary of the Chapter introduced the Chief Guest CMA (Dr.) N. K. Nimkar and CMA Sujata Budhkar, Guest of Honour. CMA Abhay Deodhar, Managing Committee Member of the Chapter felicitated the Chief Guest CMA (Dr.) N. K. Nimkar and CMA Sujata Budhkar, Guest of Honour. CMA Amit Shahane felicitated CMA Nitin Chaturbhuj, key speaker at the programme. CMA Nilesh Kekan, Treasurer & Chairman-Students Co-ordination Committee of the Chapter felicitated CMA Chaitanya Mohrir, RCM, WIRC of ICAI. CMA Abhay Deodhar, Managing Committee Member of the Chapter welcomed and congratulated the successful students. He guided the students to keep on learning & updating their knowledge. He also emphasised the importance of commitment, value of health and family in life. CMA Chaitanya Mohrir, congratulated the students and explained the importance of soft skill for further achievements. He advised the Foundation & Intermediate pass out students to sacrifice various entertainments for the successful completion of CMA course. He congratulated the CMA qualified students who got selected in the Campus Placement and also informed that there were opportunities in industries for the students who were not selected in the campus placement. He advised the students to connect with the Chapter and also explained the importance of communication soft skills, practical training etc. He described the new syllabus 2022 pattern and importance of the selective subjects. CMA Nitin Chaturbhuj, the key speaker described the expectations of the industry from

the Final passed students and advised them to divert from typical accountant to Cost Accountant, working in cost reduction strategies for increasing profit of organisation. He also mentioned the importance of target setting and MIS report. CMA Sujata Budhakar, explained how CMA position is important in the finance department of a company. She also explained the value of interaction with the people, ERP, advanced excel, presentation and communication skills, concept clarity, knowledge of business. At the same time students must pursue one hobby. CMA Amit Shahane, Practising Cost Accountant told the students to create their own brand, fulfil the dreams of their parents, and have some social activities and to pursue any one hobby which will work as a stressbuster. Chief Guest CMA (Dr.) Narhar Nimkar, congratulated newly qualified CMAs as well as the Foundation and Inter completed students. He advised them to embark upon a continuous learning process. He also mentioned the importance of commitment to the job undertaken and strict adherence of time in completing assignments. The merit and rank holder students of June 2022 examinations were felicitated with the certificates and other prizes. Students who have completed Foundation, Intermediate & Final exams of June 2022 were also felicitated with prizes. More than 40 students were awarded prizes. Students shared their experiences with the Pune Chapter in the duration of CMA Course and about the facilities like library, computer lab, cooperation of staff etc. The vote of thanks was proposed by CMA Nilesh Kekan, Treasurer & Chairman-Students Co-ordination Committee of the Chapter. The anchoring of the program was done by ICAI-Pune Chapter Students. The programme concluded with the National Anthem.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA NAVI MUMBAI CHAPTER

The Navi Mumbai Industries & SME Summit was jointly organized on 19th October 2022 at The Regenza Tunga Vashi by SME Chamber of India, Maharashtra Industry Development Association and Federation of Indian SME Associations with focus on technology, finance and exports. CMA Vaidyanathan Iyer, Chairman of the Chapter participated in the event and represented Navi Mumbai Chapter in this prestigious event. The programme commenced with the welcome address by Shri Chandrakant Salunkhe, Founder & President of SME Chamber of India and Maharashtra Industry Development Association (MIDA). The event was graced by a host of esteemed speakers being doyens in their respective spheres namely Shri Rajesh Kumar Mishra - Addl Director, DGFT,



Shri Abhijit Sen - DGM, TATA Tele Business Services, Shri Nitin Agrawal, Business Development Head, L&T SuFin, Shri Gagandeep Singh, Sr Manager SME Listing (WRO), NSE, Shri Kapil Garg, RM, SBI-Thane, Shri Prakash Nair, COO-Beacon Ventivity Wealth and Estate Planning Pvt. Ltd. Ms. Khushnuma Khan, Advocate & Solicitors K.K. Associates. The topics ranged from Exports, Technology, Creating Efficiencies in Supply Chain through Digitization, Alternate Sources of Funding for SMEs via Capital market Finance & Investment for Business Growth of SMEs and Manufacturing Sector, Mitigating Risks through Business Insurance, SMEs Back bone of India. A large number of dignitaries attended the event. On this occasion, copies of WIRC Bulletin were distributed among the dignitaries to create branding of our CMA Profession in various industries.

The Chapter conducted a webinar CEP programme on “Efficient & Effective Use of MS Excel” on 30th October 2022. The speaker was CMA Vivek Bhalerao. CMA Vaidyanathan Iyer, Chairman of the Chapter welcomed the audience and introduced the speaker and emphasized on delving deep into the intricacies of using MS Excel efficiently and effectively in various spheres in the industry. The speaker deliberated on the various aspects of MS Excel covering the following areas like IF, VLOOKUP, TRIM, AND, OR, FIND, INDEX, MATCH, FlashFill etc. The audience was listening with rapt attention and were deeply enlightened with the facts. The lucid presentation and the interactive workshop came to an end with the vote of thanks proposed by CMA Vaidyanathan Iyer, Chairman of the Chapter.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA AHMEDABAD CHAPTER

CGST commissioner Shri Shiv Kumar Sharma invited Chapter Chairman, CMA Malhar Dalwadi and Chapter representatives for a presentation 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. CCM CMA Ashwinkumar Gordhanbhai Dalwadi, Chairman of Chapter, CMA Malhar Dalwadi, Secretary of Chapter CMA Mitesh Prajapati, and Member CMA Vikas Agrawal and CMA Anuj Agrawal met the CGST Commissioner Shri Shiv Kumar Sharma on 22nd September 2022 and explained the importance of Cost Audit report during the course of a departmental audit by AG officers.

The Chapter organized a Press Meet on 28th September 2022 in connection with the results of the June’22 intermediate and final examinations. Reporters from leading electronic media and print media attended the press meet. Chairman, CMA Malhar Dalwadi & Secretary & Chairman Oral Coaching Committee, CMA Mitesh Prajapati addressed the gathering. The media also took interviews of Rank Holder students of Final & Intermediate.

The Chapter organized a 12 days Pre-Placement Orientation Program for June’22 qualified CMAs from 12th October’2022 to 22nd October’2022. In the inaugural function 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 Dalwadi felicitated 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 Ashwinkumar Gordhanbhai Dalwadi addressed the participants. CMA Harshendra Punjawat, Chief Guest gave an inspirational speech 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. The valedictory session of the Orientation Program was organized on 22nd October’2022. CMA Naveen Pujara was the Chief Guest, CMA Malhar Dalwadi, Chairman of the Chapter, CMA Dakshesh Choksi, Vice Chairman, and CMA Kushal Desai, Treasurer of the Chapter were present at 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”.

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA PIMPRI CHINCHWAD AKURDI CHAPTER

The Chapter conducted a webinar on ‘Power Communication - The Pathway to High Performance’ on 29th October 2022 at 6:00pm to 8:00pm through Google Digital platform. CMA Dhananjay Kumar Vatsyayan, Chairman of the Chapter welcomed and introduced the speakers, CMA Jaydev Mishra, Moderator. DTM Ajay Shirasker, DTM Aditya Saxena and their team members, DTM Sachin Gurav & DTM Parikshit Limkar, DTM Neha were present at the program. CMA Jaydev Mishra in his address advised, “invest for your own development, select a platform to practice self-development. Toastmaster is a strong option for this. What we need is “20 likeminded individual keen to interest in their own development”. TM Ajay said, power communication is the pathway to high performance and as member of the Institute of Cost Accountants of India, we are the custodian of the performance and we need power communication. So what is the next step? The next step is to choose a platform, to practice, self-development to build power communications. What could be the option? Of course, toastmaster is a strong option. Many members like CMA Devendra, CMA Dhananjay Kumar Vatsyayan etc. responded during the demonstration period.

The Chapter conducted a webinar on ‘Agro Finance: Need of the Hour’ on 5th November 2022 at 6:00pm to 8:00pm through Google Digital platform. CMA Pradeep Deshpande, Vice-Chairman of the Chapter welcomed and introduced CMA Vinod Shete, Chief Finance Officer (CFO), Chandu Kaka Saraf and Sons Pvt. Ltd. Pune. CMA Vinod Shete in his speech said that the, State Government is primarily responsible for the growth and development of agriculture sector and developing perspective plans and ensuring effective implementation of the programmes/ schemes.

The Chapter conducted webinar on ‘Cost Control and Cost Savings – Infra Project’ on 12th November 2022 at 6:00 pm to 8:00 pm through Google Digital platform. CMA Dhananjay Kumar Vatsyayan, Chairman welcomed the speaker CMA CS N. Rajaraman. CMA Pradeep Deshpande, Vice-Chairman of the Chapter introduced the speaker. CMA CS N. Rajaraman in his speech said, a project, however big or small, needs to be performed and delivered with care and planning. The session ended with a vote of thanks.

The Chapter conducted a Career Counselling Program on 10th November 2022 at Dr. D Y Patil College of Arts, Science & Commerce College at Akurdi. Prof. Dr. Vijay Gade, Head of Commerce Department welcomed the speaker CMA Lalitha Deepak, team of PCA Chapter, Faculty members of the Commerce department and all students.

On 11th November 2022 at Dr. Arvind Telang College of Arts, Science & Commerce College at Akurdi. Dr. Dattatray Khune, Head of Commerce Department welcomed CMA Lalitha Deepak, team of PCA Chapter, Faculty members from Commerce department and all students.

On 14th November 2022 at Dr. D Y Patil College of Arts, Science & Commerce College at Pimpri. Prof. Anita Sule faculty from Commerce Department welcomed Dr. Kishore Nikam, Vice-Principal and Head of Commerce Department, CMA Bhavesh Marolia, Secretary of the Chapter, speaker CMA Lalitha Deepak, team of PCA Chapter, Faculties from Commerce department of the College and all students. Dr. Kishor Nikam felicitated CMA Bhavesh Marolia. Career Guidance Program started with a Video Clip about CMA Course. CMA Lalitha Deepak delivered a lecture informing students about Foundation, Intermediate and Final courses of the CMA examinations.

Direct & Indirect Tax Updates - November 2022

DIRECT TAXES

- **Notification No. 120/2022 dated 11th November 2022:** In exercise of the powers conferred by sub-section (1) of section 280A of the Income-tax Act, 1961 (43 of 1961) read with section 84 of the Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015 (22 of 2015), the Central Government, in consultation with the Chief Justice of the High Court of Himachal Pradesh, Shimla, hereby designates the Courts in the State of Himachal Pradesh as mentioned in column (2) of the Table below, as Special Courts for the areas within their territorial jurisdiction as specified in column (3) of the said Table for the purposes of section 280A of the Income-tax Act, 1961 and section 84 of the Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015.

Sl No.	Court	Area
1	Court of Judicial Magistrate 1st Class, Court No. 1, Dharamshala	Una, Chamba, Kangra
2	Court of Judicial Magistrate 1st Class, Court No. 1, Rampur.	Kullu, Mandi, Solan, Kinnaur
3	Court of Judicial Magistrate 1st Class, Court No. 1, Nahan	Bilaspur and Sirmaur

- **Notification No. 121/2022 dated 14th November 2022:** In exercise of the powers conferred by sub-sections (1), (2) and (5) of section 120 of the Income-tax Act, 1961 (43 of 1961), the Central Board of Direct Taxes hereby makes the following amendments in the notification of the Government of India, Ministry of Finance, Department of Revenue, Central Board of Direct Taxes No.61/2022 dated the 10th June, 2022:

  In the said notification, in the SCHEDULE

  (I) Sl. No. 2259 - Sl. No. 2286 and the entries relating thereto shall respectively be omitted;

  (II) Sl. No. 2592 - Sl. No. 2612 and the entries relating thereto shall respectively be omitted.

- **Notification No. 123/2022 dated 14th November 2022:** In exercise of powers conferred by section 118 of the Income-tax Act, 1961 (43 of 1961), the Central Board of Direct Taxes hereby makes the following amendments in the notification of the Government of India, Ministry of Finance, Department of Revenue, Central Board of Direct Taxes No.60/2022 dated the 10th June, 2022.

  In the said notification, in the SCHEDULE, in serial number 7, in column number (3)

  (I) in item (ii), in column number (4), the entries at item (iv) and the entries relating thereto in column number (5), shall be omitted;

  (II) in item (v), in column number (4), the entries at item (iv) and the entries relating thereto in column number (5), shall be omitted

- **Notification No. 124/2022 dated 14th November 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), Central Board of Direct Taxes hereby makes the amendments in the notification of the Government of India, Ministry of Finance, Department of Revenue, Central Board of Direct Taxes No.50/2014 published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (ii) vide number S.O. 2752(E) dated the 22nd October, 2014, namely:- In the said notification, in SCHEDULE-IV, for Sl.No. 106 – Sl.No. 111 and the entries relating thereto, the serial number and the entries shall respectively be substituted.

- **Notification No. 125/2022 dated 16th November 2022:** In exercise of powers conferred by sub-clause (vi) of clause (b) of 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, Public Investment Fund (PAN: AAAJP1787D), (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 certain conditions.

- **Notification No. 126/2022 dated 30th November 2022:** In exercise of the powers conferred by clause (39) of section 10 of the Income-tax Act, 1961 (43 of 1961), the Central Government hereby notifies the following as the international sporting event, persons and specified income for the purposes of the said clause namely: - (a) Federation Internationale de Football Association Under-17 Women's World Cup, 2022 as the international sporting event; (b) the Federation Internationale de Football Association, as the person; (c) income arising from the receipts from National supporters namely; Hero Motocorp Ltd., the Department of Tourism, Government of Odisha, the National Thermal Power Corporation Limited and the Power Grid Corporation of India Limited - rupees twelve crores and fifty lakhs only (Rs. 12,50,00,000/-) as specified income arising to Federation Internationale de Football Association, from organising the Federation Internationale de Football Association, Under-17 Women's Football World Cup, 2022 in India.

- **Circular No. 22/2022 dated 1st November 2022**: Condonation of delay under section 119(2)(b) of the Income-tax Act, 1961 in filing of Form No.10A. On consideration of difficulties reported by the taxpayers and other stakeholders in the electronic filing of Form No. 10A, the Central Board of Direct Taxes (the Board) in exercise of its powers under Section 119 of the Income-tax Act, 1961 (the Act) extended the due date for filing Form No.10A required to be filed on or before 30.06.2021, to 31.08.2021 by Circular No.12/2021 dated 25.06.2021 , and further to 31.03.2022 by Circular No. 1612021 dated 29.08.2021. On consideration of the matter, with a view to avoid genuine hardship to such cases, the Board, in exercise of the powers conferred under section 119(2)(b) of the Act, hereby condones the delay upto 25.11.2022 in filing Form No.10A under sub-clause (i) of clause (ac) of sub-section

(l) of section 12A clause (i) of first proviso to clause (23C) of section 101 clause (i) of first proviso to sub-section 5 of section 80G fifth proviso to sub-section 1 of section 35 of the Act, which was required to be made electronically on or before 31.03.2022.

- **Circular No. 23/2022 dated 3rd November 2022:** Explanatory notes to the provisions of Finance Act 2022.

INDIRECT TAXES

GST

- **Notification No. 22/2022 – Central Tax dated 15th November 2022:** In exercise of the powers conferred by section 164 of the Central Goods and Services Tax Act, 2017 (12 of 2017), the Central Government, on the recommendations of the Council, hereby makes the following rules further to amend the Central Goods and Services Tax Rules, 2017.

  In the Central Goods and Services Tax Rules, 2017 (hereinafter referred to as the said rules), in FORM GSTR-9, under the heading Instructions, in paragraph 7

  (A)for the figures, letters and words "between April, 2022 to September, 2022", the figures, letters and words "of April, 2022 to October, 2022 filed upto 30th November, 2022" shall be substituted

  (B)in the Table, in second column, - (I)against serial numbers 10 & 11, for the figures and words "April, 2022 to September, 2022", the figures, letters and words "April, 2022 to October, 2022 filed upto 30th November, 2022" shall be substituted; (II)against serial number 12, for the figures and words "April 2022 to September 2022", the figures, letters and words "April, 2022 to October, 2022 upto 30th November, 2022" shall be substituted; (III) against serial number 13, for the figures and words "April 2022 to September 2022", the figures, letters and words "April, 2022 to October, 2022 upto 30th November, 2022" shall be substituted.

- **Notification No. 23/2022 – Central Tax dated 23rd November 2022:** In exercise of the powers conferred by sub-section(2) of section 171 of the Central Goods and Services Tax Act, 2017 (12 of 2017), the Central Government, on the recommendations of the Goods and Services Tax Council, hereby empowers the Competition Commission of India established under sub-section (1) of section 7 of the Competition Act, 2002(12 of 2003), to examine whether input tax credits availed by any registered person or the reduction in the tax rate have actually resulted in a commensurate reduction in the price of the goods or services or both supplied by him. This notification shall come into force with effect from 1stday of December, 2022.

- **Notification No. 24/2022 – Central Tax dated 23rd November 2022:** In exercise of the powers conferred by section 164 of the Central Goods and Services Tax Act, 2017 (12 of 2017), the Central Government, on the recommendations of the Council, hereby makes the following rules further to amend the Central Goods and Services Tax Rules, 2017. In the Central Goods and Services Tax Rules, 2017:

  (a)rule 122 shall be omitted;(b)rules 124 and 125 shall be omitted;(c)in rule 127,-(i) in the marginal heading, for the word "Duties", the word "Functions", shall be substituted;(ii) for the words "It shall be the duty of the Authority,-", the words "The authority shall discharge the following functions, namely:–" shall be substituted;(d)rule134 shall be omitted;(e)rule 137 shall be omitted;(f)after rule 137,in the Explanation, for clause (a), the following clause shall be substituted, namely:–'(a) "Authority" means the Authority notified under sub-section (2) of section 171 of the Act;'

- **Circular No. 181/13/2022-GST dated 10th November 2022**: Clarification on refund related issues. Attention is invited to sub-section (3) of section 54 of CGST Act, 2017, which provides for the refund of unutilized input tax credit in cases where credit is accumulated on account of rate of tax of inputs being higher than the rate of tax on output supplies i.e. on account of inverted duty structure. Sub-rule (5) of rule 89 of CGST Rules, 2017 prescribes the formula for grant of refund in cases of inverted duty structure. Further, vide Notification No. 09/2022-Central Tax (Rate) dated 13.07.2022, which has been made effective from 18.07.2022, the restriction has been placed on refund of unutilised input tax credit on account of inverted duty structure in case of supply of certain goods falling under chapter 15 and 27. In order to clarify the issues and to ensure uniformity in the implementation of the provisions of law across the field formations, the Board, in exercise of its powers conferred by section 168 (1) of the Central Goods and Services Tax Act, 2017 (hereinafter referred to as "CGST Act"), hereby clarifies the issues.

- **Circular No. 182/13/2022-GST dated 10th November 2022:** Guidelines for verifying the Transitional Credit in light of the order of the Hon'ble Supreme Court in the Union of India vs. Filco Trade Centre Pvt. Ltd., SLP(C) No. 32709-32710/2018, order dated 22.07.2022 & 02.09.2022.

CUSTOMS

- **Notification No.56/2022-Customs dated 1st November 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, 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, Ministry of Finance (Department of Revenue), No. 50/2017-Customs, dated the 30thJune, 2017, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 785(E), dated the 30thJune, 2017, namely:

  In the said notification, in the Table, against S. No. 404, in column (2), for the entries, the entries "27, 29, 31, 38, 39, 73, 82, 84, 85, 87, 89 or 90" shall be substituted.

- **Notification No.57/2022-Customs dated 17th November 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 ,falling within any Chapter of the First Schedule to the Customs Tariff Act, 1975 (51 of 1975) and description specified in column (2) of the Table below, from the whole of the duty of customs leviable thereon as per the rates specified in the First Schedule to the said Customs Tariff Act,1975,if imported or purchased out of bond by the Governor of any State on appointment or during their tenure in the office namely:

Motor car for the use of Governor of the State.

- **Notification No.58/2022-Customs dated 18th November 2022:** Seeks to amend Notification No. 27/2011- Customs, dated the 1st March, 2011 in order to withdrawal export duty on iron ore & steel products. 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 makes the following further amendments in the notification of the Government of India in the Ministry of Finance (Department of Revenue), No. 27/2011-Customs dated the 1st March, 2011.
- **Notification No.59/2022-Customs dated 18th November 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 30thJune, 2017, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 785(E), dated the 30thJune, 2017, namely:

  In the said notification, in the Table, (1)Serial Nos. 141A, 141B and the entries relating thereto shall be omitted;(2) Serial No. 364D and the entries relating thereto shall be omitted.
- **Notification No.60/2022-Customs dated 18th November 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 theMinistryofFinance(DepartmentofRevenue),No.11/2021-Customs,datedthe1stFebruary,2021. In the said notification, in the Table,S.No.10A and the entries relating thereto shall be omitted.
- **Notification No.61/2022-Customs dated 25th November 2022:** Seeks to amend certain specific FTA/PTA notifications.
- **Circular No.23 /2022-Customs dated 3rd November 2022**: Faceless Assessment - Anonymized Escalation Mechanism & extension of Standard Examination Orders through RMS (Phase 1, Part 2).
- **Circular No.24 /2022-Customs dated 28th November 2022:** Improvements in SWIFT: Integration of ICEGATE with AQCS-ICS (Animal Quarantine and Certification Services-Import Clearance System) effective 01.12.2022.

EXCISE

- **Notification No. 36/2022 Central Excise dated 1st November 2022:** 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, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 584(E), dated the 19thJuly, 2022, namely:-In the said notification, in the Table,-(i)against S. No. 1, for the entry in column (4), the entry "Rs. 9,500per tonne" shall be substituted;(ii) against S. No. 2, for the entry in column (4), the entry "Rs. 5 per litre" shall be substituted.
- **Notification No. 37/2022 Central Excise dated 1st November 2022:** 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, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 492 (E), dated the 30thJune, 2022, namely: In the said notification, in the Table,-(i)against S. No. 2, for the entry in column (4), the entry "Rs. 11.50per litre" shall be substituted.
- **Notification No. 38/2022 Central Excise dated 16th November 2022:** 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, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 584(E), dated the 19thJuly, 2022, namely: In the said notification, in the Table,-(i)against S. No. 1, for the entry in column (4), the entry "Rs. 10,200per tonne" shall be substituted.
- **Notification No. 39/2022 Central Excise dated 16th November 2022:** 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, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 492 (E), dated the 30thJune, 2022, namely: In the said notification, in the Table,-(i)against S. No. 2, for the entry in column (4), the entry "Rs. 9 per litre" shall be substituted.

Sources: *incometax.gov.in, cbic.gov.in*

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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	**Paper – 1 :** Fundamentals of Economics & Management (100 Marks 50 Multiple Choice Questions) **Paper – 2 :** Fundamentals of Accounting (100 Marks 50 Multiple Choice Questions)	**Paper – 3 :** Fundamentals of Laws & Ethics (100 Marks 50 Multiple Choice Questions) **Paper – 4 :** 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 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 13th 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

CMA Kaushik Banerjee
Secretary

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
(STATUTORY BODY UNDER AN ACT OF PARLIAMENT)

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 (Time: 10.00 A.M. to 01.00 P.M.)		FINAL (Time: 2.00 P.M. to 5.00 P.M.)	
	(Group – I)	(Group – II)	(Group – III)	(Group – IV)
Thursday, 5th January, 2023	Financial Accounting (P-05)	-------------------	Corporate Laws & Compliance (P-13)	-------------------
Friday, 6th January, 2023	-------------------	Operations Management & Strategic Management (P-09)	-------------------	Corporate Financial Reporting (P-17)
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)

Group (s)		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

1. 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.
2. STUDENTS OPTING FOR OVERSEAS CENTRES HAVE TO APPLY OFFLINE AND SEND DD ALONGWITH THE FORM.
3. (a) Students can login to the website 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 5th November, 2022.
5. The mode of examination will be offline-centre based.
6. The provisions of Direct Tax Laws and Indirect Tax Laws, as amended by the Finance Act, 2021, including notifications and circulars issued up to 31st 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/Syl-2016.php
7. Companies (Cost Records and Audit) Rules, 2014 as amended up to 31st May, 2022 is 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/Syl-2016.php
8. 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 31st 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/Syl-2016.php
9. For amendments in IND 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/Syl-2016.php
10. 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/Syl-2016.php
11. Examination Centres: Adipur-Kachchh (Gujarat), Agartala, Agra, Ahmedabad, Akurdi, Allahabad, Angul Talcher, Asansol, Aurangabad, Bangalore, Bankura, Baroda, Berhampur – Ganjam (Odisha), Bharuch Ankleshwar, Bhilai, Bhilwara, Bhopal, Bewar City(Rajasthan), Bhubaneswar, Bilaspur, Bikaner (Rajasthan), Bokaro, Calicut, Chandigarh, Chennai, Coimbatore, Cuttack, Dindigul, Dehradun, Delhi, Dhanbad, Duliajan (Assam), Durgapur, Ernakulam, Erode, Faridabad, Ghaziabad, Guntur, Gurgaon, Guwahati, Haridwar, Hazaribagh, Hosur, Howrah, Hyderabad, Indore, Jaipur, Jabalpur, Jalandhar, Jammu, Jamshedpur, Jodhpur, Kalyan, Kannur, Kanpur, Kolhapur, Kolkata, Kollam, Kota, Kottakkal (Malappuram), Kottayam, Lucknow, Ludhiana, Madurai, Mangalore, Meerut, Mumbai, Mysore, Nagpur, Naihati, Nasik, Nellore, Neyveli, Noida, Palakkad, Panaji (Goa), Patiala, Patna, Pondicherry, Port Blair, Pune, Raipur, Rajahmundry, Ranchi, Rourkela, Salem, Sambalpur, Shillong, Shimla, Siliguri, Solapur, Srinagar, Surat, Thrissur, Tiruchirapalli, Tirunelveli, Tirupati, Trivandrum, Udaipur, Vapi, Vashi, Vellore, Vijayawada, Vindhyanagar, Waltair and Overseas Centres at Bahrain, Dubai and Muscat.
12. A candidate who is fulfilling all conditions specified for appearing in examination will only be allowed to appear for examination.
13. Probable date of publication of result: 17th 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

CMA Kaushik Banerjee
Secretary

Benevolent Fund

FOR THE MEMBERS OF THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

CMA Bhawan, 12 Sudder Street, Kolkata - 700016

OBJECTIVE

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.

LIFE MEMBERSHIP FEE

Onetime payment of ₹7500/-

BENEFITS

- ***Income Tax Benefit under section 80G***
- ***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.***

Coverage of Critical Illness, leading to hospitalization, may cover the following -

- Cancer / Malignancy
- 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
- Thalassaemia
- 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.

To apply for life membership or for further details please visit
https://eicmai.in/External/Home.aspx#

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