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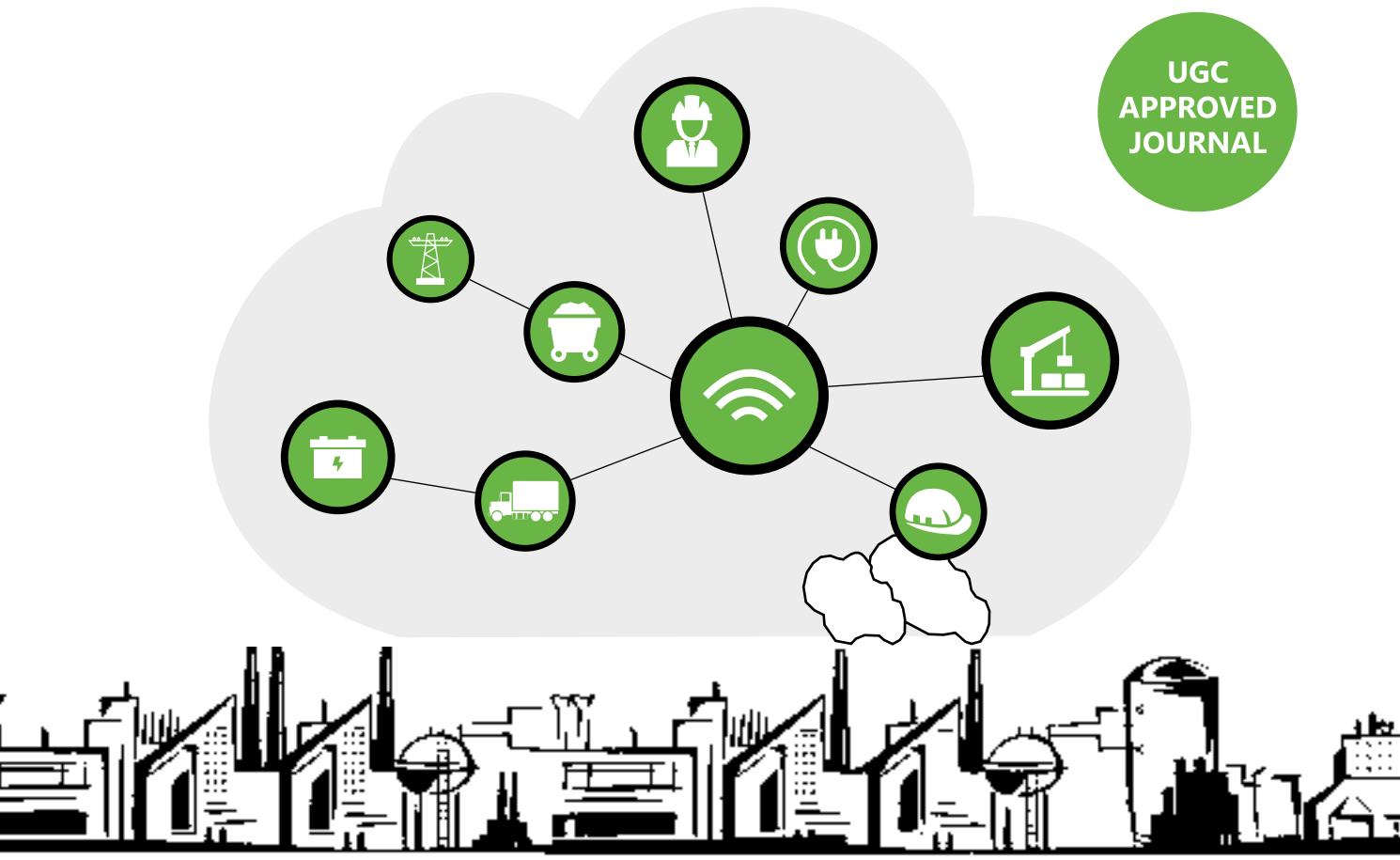

INDUSTRY 4.0 LEVERAGING FOR EFFICIENCY, ADAPTABILITY, PRODUCTIVITY

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
(Statutory Body under an Act of Parliament)
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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

Statutory body under an Act of Parliament

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

MISSION STATEMENT

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

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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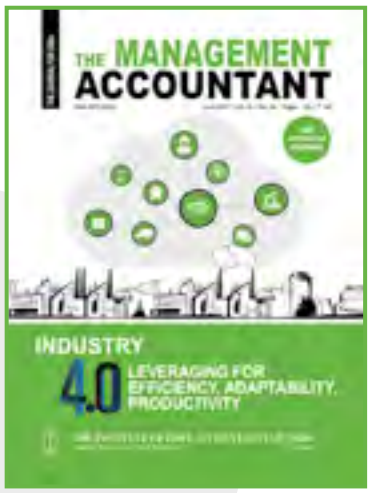

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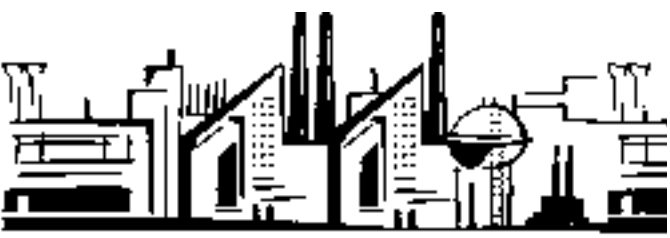

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We have expanded our Readership from 1 to 94 Countries

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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EDITORIAL

Greetings!!!

The rise of new digital industrial technology, known as Industry 4.0, is a transformation that makes it possible to gather and analyse data across machines, enabling faster, more flexible, and more efficient processes to produce higher-quality goods at reduced costs. This manufacturing revolution will increase productivity, shift economics, foster industrial growth and modify the profile of the workforce, ultimately changing the competitiveness of companies and regions.

India has been gearing up for Industry 4.0, surpassing another industrial revolution and lunging unwaveringly into the Internet of Things. India is now the hotspot of most industrial activities made possible by our IT stronghold. India today is prepared for connectivity, since it is very well known as IT-hub for the world. Indian IT-companies and India based subsidiaries of global IT-players produce smart software solutions for the world.

Industry 4.0, is the current trend of automation and data exchange in manufacturing technologies. It is the future of manufacturing. Its enhanced technology, digital systems and automated processes make it optimum for manufacturing of quality products.

Disruptive innovations are currently changing the landscape of many industries and their business models. Because of increasingly digitalized processes and an exponential growth of sensible data, supply chains are also impacted by the fourth industrial revolution. Since the supply chain will obviously undergo an organizational change, a theoretical framework is necessary to understand which activity is impacted from a holistic management-perspective.

McKinsey, for example, helps explain these disruptive trends defining Industry 4.0 –

- Big data
- Advanced analytics
- Human-machine interfaces
- Digital-to-physical transfer

The emerging technologies and applications in automated data gathering using the Internet of Things (IoT), machine learning and artificial intelligence, as well as analytics and cloud computing systems in play today are already changing the way the business is conducted.

Industry 4.0 is an approach that uses advanced technologies to reinvent products and services from design and engineering to manufacturing and support, accelerating operational efficiency and enterprise-wide growth. The Fourth Industrial Revolution characterised by the increasing digitization and interconnection of products, value chains and business models has arrived in the industrial sector.

Companies face formidable challenges in the adoption of these new technologies. To build and sustain a lead in the race to full implementation, they need to broaden and deepen their practical knowledge about digital technologies and then develop and implement tailored digital manufacturing strategies.

A great challenge for the future lies in the transfer of Industry 4.0 concepts and technologies to small and medium sized enterprises. Industry 4.0 technologies offer great opportunities for the SME sector to enhance its competitiveness. SMEs will only achieve Industry 4.0 by following SME-customized implementation strategies and approaches and realizing SME-adapted concepts and technological solutions.

The global manufacturing landscape is being transformed by digital technologies and huge efficiency and productivity gains are being realized through cost reductions, quality improvements, customization and a quantum leap in performance.

The fourth Industrial Revolution is already on its way. Industry 4.0 will be a challenge and may also have answers for India's continued advantage in the global manufacturing industry. Industry 4.0 emphasizes the idea of consistent digitization and linking all productive units in an economy.

Accountants by adopting Industry 4.0 will prepare to face an incoming stream of real-time financial data instead of periodically checking in with a bookkeeper. Auditing in particular will become much easier. Accountants can catch financial fraud faster, minimizing the damage and can also notice financial trends and offer more real time advice.

This issue presents a good number of articles on the cover story theme *'Industry 4.0: Leveraging for Efficiency, Adaptability, Productivity'* by distinguished experts and authors. We look forward to constructive feedback from our readers on the articles and overall development of the journal. Please send your mails at *editor@icmai.in.* We thank all the contributors to this important issue and hope our readers enjoy the articles.

THE JOURNAL FOR CMAs

THE MANAGEMENT ACCOUNTANT

-: PAPERS INVITED :-

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

Theme: July 2019

Integrated Transport Ecosystem: the Way Ahead

Subtopics

- *Regulatory frameworks for integrated shared mobility Governance in India*
- *Ensuring Transport Safety and Security*
- *Transportation Infrastructure Supporting the Environment*
- *Public-Private Participation (PPP) in Infrastructure*
- *Intervention of Artificial Intelligence in Mobility industry*
- *Clean & Green Mobility in India*
- *Regulatory hurdles and urban transport*
- *Role of Transport in promotion of Tourism industry*
- *Role of CMAs*

Theme: August 2019

GST Audit: Emerging Scope for CMAs

Subtopics

- *GST Audit - An Overview*
- *GST Audit and Annual Return - Issues, Approach and Challenges*
- *GSTR 9C: Enhancement of scope for Professionals like CMAs*
- *Input Tax Credit Utilization Rules*
- *Special Audit in GST: Role of CMAs*
- *GST Audit and its impact on Ease of Doing Business*

Theme: September 2019

Cost Governance

Subtopics

- *Concept of Cost Governance*
- *Cost Governance in Education Sector*
- *Cost Governance in Society & Economy*
- *Cost Governance in Industry & Corporate*
- *Cost Synergy and Cost Consciousness*
- *Embrace Technology for effective Cost Governance*
- *Sustainability of Business and Economy through Cost Consciousness*
- *Role of CMAs*

Theme: October 2019

Financial Technology (Fintech) – Changing landscape in Financial Services

Subtopics

- *FinTech and its Role in the Future of Financial Services*
- *Fintech: Capturing the Benefits, Avoiding the Risks*
- *Advent of Financial technology: a boon for investors*
- *Impact of Financial Technology on Accounting & Auditing*
- *Potential of Financial Technology to unleash a new era of competition, innovation and job creation*
- *Application of Fintech on Small and medium sized enterprises (SMEs)*
- *Embracing of Fintech: widening scope for professionals like CMAs*

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 publication anywhere else. Please send your articles by e-mail to editor@icmai.in latest by the 1st of the previous month.

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PRESIDENT'S COMMUNIQUÉ

"It is never too late to be what you might have been."

-- George Eliot

CMA AMIT ANAND APTE
President
The Institute of Cost Accountants of India

My Dear Professional Colleagues,

Namaskaar!!!

On behalf of the Institute, I congratulate Shri Narendra Modi ji on being unanimously elected as the leader of the NDA after getting a massive mandate from the people of this great country and being appointed as Hon'ble Prime Minister of India for the second consecutive term.

The Institute also extends its heartiest congratulations and best wishes to Smt. Nirmala Sitharaman on her appointment as Cabinet Minister of Finance & Corporate Affairs and Shri Anurag Singh Thakur as Minister of State for Finance & Corporate Affairs, Government of India. The Institute is fully committed to work under their able leadership & guidance for regulating the functioning of the corporate sector in accordance with law towards good governance, cost optimization, improving efficiency and ushering an era of accountability for the economic development of the Country.

Celebration of Foundation Day of the Institute

I congratulate all Regions and Chapters of the Institute for celebrating 28th May 2019 as the Foundation Day of the Institute and convey my best wishes to entire CMA fraternity.

Cost Governance Week

I am happy to inform that all the Regions and Chapters of the Institute celebrated "**Cost Governance Week**" during 22nd to 28th May 2019 by organizing various Seminars / Round-table discussions / Workshops to propagate cost governance and create brand CMA.

MoU with Arka Jain University, Jharkhand and Institution of Engineers

I am pleased to sign a MoU with **Arka Jain University, Jharkhand** on 15th May 2019 during National Students Convocation at Kolkata. The MoU will facilitate members of the institute with graduation degree to purse the Ph.D. program of the Arka Jain University.

I am pleased to sign a path-breaking MoU with **The Institution of Engineers** (India) to launch an exclusive course for IEI Engineer members, "Executive Diploma in Cost & Management Accounting for Engineers" on 27th May, 2019 evening at Kolkata. Dr. T M Gunaraja, President, The Institution of Engineers (India) signed the MOU on behalf of IEI. Eminent dignitaries from corporate and academia including Vice Chancellor, Dean, Registrar, CFO, Directors and others were present in this historic event.

National Students Convocation

I am happy to share that the Institute successfully organised its National Students Convocation – 2019 on 15th May, 2019 at Kolkata. Professor Basab Chaudhuri, Vice Chancellor, West Bengal State University graced the convocation as the Chief Guest. Other Guests of Honour were Professor Ashok Ranjan Thakur, Vice Chancellor, Sister Nivedita University, Kolkata CS Dr. Shyam Agarwal, Past President of Institute of Company Secretaries of India, and Shri Jasbir Dhanjal, Registrar, Arka Jain University, Jharkhand who also graced the occasion. They released the Convocation Souvenir in the inaugural session. While addressing the vast gathering, the Chief Guest expressed his happiness to award the professional students and also appreciated the Institute's role in pursuing its vision of cost competitiveness, cost management, efficient use of

resources and structured approach to cost accounting as the key drivers of the profession. The convocation witnessed felicitation of qualified CMAs with prizes, rank certificates & medals and participation of eminent personalities including academicians, corporate, professionals and huge number of students cutting across the length and breadth of the country.

To apprise all the members of the activities / initiatives undertaken by the Departments/ Directorates of the Institute, I now present a brief summary of the activities.

Advanced Studies Directorate

The Directorate of Advanced Studies organized a National Seminar on "Digital Transformation of Business and Data Analytics" at Bharatiya Vidya Bhavan Institute of Management Science auditorium on 22nd May 2019 at Kolkata. Dr. Paritosh Basu, Sr. Professor, NMIMS School of Business Management, Mumbai and Dr. Somnath Roy, Associate Professor, NMIMS School of Business Management, Mumbai were the main speakers of the National Seminar. Around one hundred delegates from corporate and academia were present.

Banking & Insurance Committee

The Committee conducted a Webinar on "Techniques in Project Appraisal and Financing" on 20th May 2019 by a Management Consultant which was well appreciated by members.

Directorate of CAT

As I had informed in one of my last communiqués that the CAT Directorate commenced online admissions for CAT Course, I am glad to share that the response of prospective students, ROCCs and Chapters to the online admission procedure has been overwhelming. The Directorate has received more than 500 admissions for December 2019 term. I would like to once again thank Chairman-CAT and place on record the efforts of Directorate of CAT and IT Department for implementation of online admissions. I hope the number of admissions may see the upward trend for the coming sessions.

CAT Directorate issued Notification for the CAT Course (Entry Level) Part - I Examination - JULY 2019 term. CAT Committee is striving to revise syllabus of the CAT course based on the requirement of the Industry from an Accountant. The Committee also felt the need to revise the syllabus in view of the changing Taxation Laws in the country. The modalities to revise the syllabus have already been framed by the committee lead by Chairman (CAT) and hopefully soon the revised syllabus with revised study material will be available for the students.

International Affairs Department

I am pleased to share that the representatives from the Institute attended the CAPA meetings and events during 31st May and 1st June 2019 in Kuala Lumpur, Malaysia.

Insolvency Professional Agency (IPA) of Institute of Cost Accountants of India

The Insolvency Professional Agency of the Institute organized various Round table Interactions, workshops and webinars during the month on:

- National Conference on IBC with ASSOCHAM at Delhi on 4th May 2019;
- Round table discussion on "Changing Dynamics of Valuation" at Mumbai on 8th May 2019;
- Round table discussion on "Changing Dynamics of Valuation" at Chennai on 16th May 2019;
- 18th Batch of Pre- registration Educational Course jointly conducted by 3 IPAs at Delhi from 20th -26th May 2019;
- Workshop on "Orientation Programme on Insolvency Bankruptcy Code" jointly with IBBI and ICSI at Jaipur on 25th May 2019.

I am pleased to inform that I attended the Board Meeting of INSOL India held on 9th May, 2019 at INSOL India Secretariat, New Delhi.

Membership Department

With great pleasure I congratulate and extend a warm welcome to all the 253 new members who were granted Associate membership and to the 68 members who were advanced to Fellowship during the month of May 2019.

A gentle reminder to Certificate of Practice holders who have not yet renewed their CoP for 2019-20, such members can get their Certificate of Practice renewed for the current financial year latest within 30th June, 2019 by way of making application and payment of required fees as detailed in the advisory available in the members online system.

Professional Development and CPD Committee

PD & CPD Committee organized webinar on "Role of

Technology in the New Taxation Era" on 17th May 2019. The Institute was associated with PHD Chamber of Commerce & Industry for conducting Conclave on "Ind AS and its Convergence in India Prospects and Challenges" and "Practical aspects of GST Annual Return (GSTR-9C) and How to fill up the form clause by clause" on 3rd May and 17th May 2019 respectively.

Regional Councils and Chapters organized 26 programs, seminars and discussions on the topics of professional relevance and importance for the members such as, Cost Governance through Cost Audit & Cost Management, Industrial Resolution 4.0 and Areas for Cost Accountants in Practice and in Service, GST Audit & New Roc Forms under the Companies Act, E way bill, Insolvency and Bankruptcy Code, 2016, Capital Market in India - Scope & Analysis and so on. I hope our members have been immensely benefited with these programs.

Representation with Government, PSUs, Banks and Other Organizations:

I am pleased to inform you that on the Institute's representation, Indian Institute of Management (IIM) Lucknow included Cost Accountants for GST Consultation work.

PD Directorate is sending representation letters to various organizations for inclusion of cost accountants for providing professional services. Projects and Development India Limited (PDIL), Maharashtra State Electricity Transmission Company Limited (MSETCL), REC Limited (Formerly Rural Electrification Corporation Limited), Airport Authority of India (AAI), Allahabad bank, Chhattisgarh State Power Holding Company Limited (CSPHCL), Himachal Pradesh Power Transmission Corporation Ltd. (HPPTCL), National Capital Region Transport Corporation Ltd. (NCRTC), Andrew Yule & Company Limited, Steel Authority of India Limited (SAIL), The Odisha Mining Corporation limited, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL), Brahmaputra Valley Fertilizer Corporation Limited, NAMRUP etc., have included Cost Accountants in their Tenders/EOIs during the month of May 2019.

Taxation Committee

Here, I would like to appreciate the efforts of Tax Research Department in their endeavor in bringing out and highlighting the areas of contributions which may be made by cost accountants. In this effort, the department has submitted representation in various Government departments and Ministries. A representation on "Inclusion of Cost Accountants for authorizing the various certifications under Customs Act and Foreign Trade Policy" was submitted on 23.05.2019. The department also submitted three other representations on 'Request for inclusion of "Cost Accountants (CMA)" on the labels of Forms under point no. C of GSTR-10 (Final Return)', 'Suggestions from The Institute of Cost Accountants of India for Budget 2019-20 regarding changes in Direct Taxes' and 'Suggestions from The Institute of Cost Accountants of India for Budget 2019-20 regarding changes in Indirect Taxes'. Among the courses 'Certificate Course on GST' 4th Batch has commenced in 9 locations through offline Mode and PAN India through online mode. I urge the department to continue their toil and contribute for the interest of the stakeholders.

Some of the Achievements of the Council of the Institute (2015-19)

The period of the council 2015-19 is about to end and a new council will take charge in July 2019. I take this opportunity to highlight some of the major achievements of the present Council over the last 4 years.

Inclusion/recognition/empanelment of Cost Accountants:

- Inclusion of CMA in the **GST law**;
- Inclusion of CMAs in **Customs Brokers Licensing Regulations 2013**;
- Indian Banks' Association (IBA) accepted the Institute's request and issued advisory to its Member Banks to consider Cost Accountants/ Firms of Cost Accountants for **Stock Audit, Risk Based Internal Audit and Other Operations in banks**.
- The Indian Council of Arbitration authorized Cost Accountants for empanelment in the **panel of arbitrators** under the category of financial experts.
- Members of the Institute can now become **member of Direct Tax Professional Association**: www.dtpa.org.
- The Ministry of Skill Development and Entrepreneurship, Government of India, included our Institute as member of Common Norms Committee to update and suitably revise the Common Norms for the Skill Development Courses being conducted by Government of India.
- Central Board of Direct Taxes (CBDT) modified the Electronic Furnishing of Return of Income Scheme, 2007 to include the name of Cost Accountants and Firms of Cost Accountants to enable them to be the

intermediaries to electronically file Income Tax returns of the taxpayers.

- Securities and Exchange Board of India (SEBI) issued two notifications to amended Securities and Exchange Board of India (Real Estate Investment Trusts) Regulations, 2014 and Securities and Exchange Board of India (Infrastructure Investment Trusts), Regulations, 2014 wherein **definition of valuer** in respect of financial valuation has been modified **to include a Cost Accountant** in whole-time practice.

- Department of Commerce, Ministry of Commerce and Industry issued Special Economic Zones (2nd Amendment) Rules, 2019 and consider Cost Accountants for **certification of Form-I Annual Performance Report for Units** under Rule 22 of Special Economic Zones Rules, 2006.

- **Bureau of Indian Standards** included Cost Accountants for the purpose of authentication of production statement in the Guidelines for Renewal of License (RoL) as per the conformity assessment Scheme – I of Schedule – II of BIS (Conformity Assessment) Regulations, 2018. Bureau of Indian Standards Dehradun also issued a corrigendum to include Cost Accountants for Accounting Work.

- Indian Bank's Association (IBA) considered the Cost Accountants for **empanelment to take up assignments relating to forensic audit** of Frauds upto INR 50 crores & Frauds above INR 50 crores in the Banking Industry.

- **Certification from Cost Accountants under Public Procurement (Preference to Make in India), Order 2017:** Ministry of Commerce and Industry, Department of Industrial Policy, Government of India, directed all Central Ministries/ Departments/ CPUs/ inter alia, that in case of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the cost auditor (if supplier is a company) or from a practicing Cost Accountant (in respect of suppliers other than companies) giving the percentage of local content.

- Cost Accountants in practice recognized under **Regulation 11** of the **Foreign Exchange Management (Transfer or Issue of Security by a Person Resident Outside India) Regulations, 2017** for valuation of capital instruments of an Indian company and also under **Schedule 2** - Purchase/ Sale of capital instruments of a listed Indian company on a recognized stock exchange in India by Foreign Portfolio Investors and **Schedule 6** - Investment in a Limited Liability Partnership (LLP) for valuation on an arm's length basis as per pricing methodology.

- Securities and Exchange Board of India included Cost and Management Accountants to carry out **internal audit on annual basis of RTAs**.

- Inclusion of Cost Accountants for providing **Certification for GST liability on Existing Works Contracts of Indian Railways**.

- **Amendments in SEZ Rules, 2016 notified by Ministry of Commerce:** Words "goods from an Independent Chartered Engineer" are being substituted with the words "goods and services from an Independent Chartered Engineer or Independent Chartered Accountant or Cost Accountant as the case may be".

- Inclusion of Cost Accountants in **certifying the refund of IGST claimed by Exporters** and it has been made official by the CBIC with Circular No. 33/2018-Customs, dated: 19th September, 2018.

- **Empanelment of Auditors by C&AG:** The CAG of India issued a notification through which C&AG has invited applications from Chartered Accountants for empanelment of auditors for the year 2019-20 under Sections 139 (5) and 139(7) of the Companies Act 2013. Section 139 deals with Appointment of "Financial Auditor" and Section 139(5) / 139(7) deal with appointment of auditor for Government Company or any other company owned or controlled, directly or indirectly, by the Government. During the earlier years, this empanelment was called for auditors without mentioning sections. This used to create a confusion as to whether the same is for the purpose of internal auditor also. However with the present notification, it is clear that the empanelment of Chartered Accountants with CAG is meant for audit of financial record only and not for Internal Audit under section 138 of the Companies Act. This initiative of CAG should remove difficulty that the Cost Accountants used to face while filing tenders of Internal Audit since many companies used to also ask for CAG empanelment number as one of the conditions in the tendering process.

MOUs:

- MoU with AP State Skill Development Corporation for

offering CAT Course in the state of Andhra Pradesh.

- MoU with Chartered Institute of Public Finance Accountants (CIPFA) UK.
- MoU with Institute of Valuers.
- MoU with Mahatma Gandhi Central University, Bihar with the objective of extending help and co-operation in developing curriculum of academic programs, development and conduct of programs and courses, which students can pursue simultaneously with or without mutual exemptions.
- MoU with Dinhata College, North Bengal University to encourage skill development and entrepreneurship development.
- MoU with the West Bengal State University (WBSU)
- MoUs with Rajasthan Skill and Livelihoods Development Corporation and Andhra Pradesh Skill Development Corporation for providing skill development course to the youth of the two States by offering offered CAT course under this MOU.
- MoU with Ravenshaw University, Odisha
- MoU with Fakir Mohan University, Odisha and Odisha Commerce Association
- MoU with Techno India Group (TIG)
- MoU with the Institute of Certified Management Accountants of Sri Lanka (CMA Sri Lanka) to assist CMA Sri Lanka in the formulation of Cost Accounting Standards in Sri Lanka.
- Institute have partnered with the Skill Development Initiative of GOI through Certificate in Accounting Technicians (CAT) Course. Institute is registered as Project Implementing Agency (PIA) for the various skill development projects offered under Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDUGKY) of GOI.
- ICWAI Management Accounting Research Foundation (ICWAI MARF), a Section 8 Company, promoted by the Institute of Cost Accountants of India and Indian Railways entered into MOU wherein the ICWAI MARF is undertaking a comprehensive study of existing Costing System in Indian Railway and develop a suitable up-gradation of the existing system to ensure managerial analysis of costing data for efficiency improvements in key performance areas.
- MoU with Arka Jain University, Jharkhand.
- MoU with Institution of Engineers.

Incorporation of Insolvency Professional Agency (IPA) and Registered Valuers Organisation (RVO)

- The Institute incorporated a Section 8 Company to function as **Insolvency Professional Agency (IPA) of the Institute of Cost Accountants of India** under the provisions of the Insolvency and Bankruptcy Code 2016.
- Institute was the first professional body in India to launch Educational Courses on Valuation **through ICMAI Registered Valuers Organisation (RVO)** [a section 8 company under Companies Act, 2013], which is recognised under the Insolvency and Bankruptcy Board of India (IBBI) to conduct the Courses for three different Asset Classes - Land & Building, Plant & Machinery, and Securities or Financial Assets.

New Infrastructure / Centre of Excellence / Overseas Centre

- **Cochin** Centre for Excellence was inaugurated on 1st May 2016.
- **Inauguration of CMA Bhawan, Pune** at the auspicious hands of Shri Prakash Javadekar ji, Hon'ble Union Minister Human Resource Development on 9th December, 2018.
- Institute opened its 10th Overseas Centre at **Singapore**. The center was inaugurated on in the presence of H.E. Jawed Ashraf, High Commissioner of India to Singapore.

Visit of Hon'ble President of India and Vice President of India at The Institute Summits/Foundation Day/ Conventions

- Institute had the privilege to have the then **Hon'ble President of India, Shri Pranab Mukherjee** as "Chief Guest" of the Global Summit held on June 29, 2017 at Kolkata.
- **Shri M. Venkaiah Naidu, Hon'ble Vice President of India** inaugurated as the "Chief Guest" 58th National Cost Convention of the Institute held on March 16th –

17th, 2018 at Vigyan Bhawan, New Delhi.

- **Shri Ram Nath Kovind, Hon'ble President of India** inaugurated Platinum Jubilee celebrations of the Institute as "Chief Guest" of the Celebrations on 14th July, 2018 at Vigyan Bhawan, New Delhi.

Guidance Note/Hand Book/Bulletin

The Institute published several guidance notes and handbooks to guide the members of the Institute and all other stakeholders on the subject in order to protect the interest of consumers.

- Guidance Note on Anti Profiteering
- Maintenance of Cost Records and Cost Audit of Construction Industry.
- Guidance Notes on Internal Audit for Engineering Industry
- Guidance Notes on Plantation Industry.
- Guidance Note on Companies (Cost Records and Audit) Rules, 2014
- Guidance Note on Reporting on Fraud under Section 143 (12) of Companies Act, 2013
- Guidance Note on Compilation Engagements by a Cost Accountant.
- Guidance Note on Responsibility of Directors as regards Maintenance of Cost Records as per clause (xi) of sub-rule 5 of rule 8 of the Companies (Accounts) Rules, 2014.
- Guidance Note on Corporate Insolvency Resolution Process;
- Guidance Note on Block Chain Technology
- Guidance Note on Electricals and Electronics Industry
- Compilation of Response to Queries by Technical Cell (Cost Audit, Compliance and others).
- Guidance Note on GST Audit
- Guidance Note on GST Annual Return
- Handbook on Works Contract under GST
- Handbook on E-way Bill
- Handbook on Export under GST
- Compilation of GST Notifications & Circulars
- Input Tax Credit
- Handbook on TDS,
- International Taxation and Transfer Pricing,
- Developed Guidance Note on CSR by CASB;
- Guidance notes on CAS 2 and CAS 12;
- Several technical literature on Taxation including most prominent issues like An Insight of GST in India, Guidance Note on Rules 6 & 7 of CENVAT Credit Rules, 2004, Clause-wise analysis of Model GST Law 2016 were published;
- Information on Professional Avenues for 'Cost Accountants in Practice'.
- Bi-monthly "Tax Bulletin"
- E-Bulletin for Members in Industry.

Cost Accounting Standards/Cost Auditing Standards

- Government of India, Ministry of Corporate Affairs, granted Central Government's approval to the 4 Cost Auditing Standards.
- Additional 15 Standards on Cost Auditing (SCAs) developed and submitted to Government for its approval;
- Cost Accounting Standard on Cost of Production / Acquisition / Supply of Goods / Provision of Services [CAS-4 (Revised 2018)]
- Developed two more Cost Accounting Standards.

New Courses

- **Directorate of Advanced Studies launched the following** new Courses:
  - ✓ Executive Diploma in Business Valuation

- ✓ Executive Diploma in Cost & Management Accounting for Engineers
- ✓ Certificate Course in Arbitration
- ✓ Certificate Course in Goods & Services Tax
- ✓ Certificate Course in Forensic Audit, Control
- ✓ Certificate Course in Data Analytics and
- ✓ Certificate Course in IS Audit (Revised)

Excellent growth in students admissions and Placement of qualified CMAs

With the efforts of the Training & Educational Facilities and Placement Committee & Directorate, the Institute has achieved excellent **growth in placement** of qualified CMAs through Campus Placement drives. Introduction of **pre-placement Industry Orientation training** to give an opportunity to passed out students to get a feel of the real business environment in order to prepare them better to face the challenges of placement has helped the overall placements.

During the academic year 2018-19, we have achieved over **40% growth in the number of admissions**.

Representation in IFAC/CAPA/SAFA

- CMA (Dr.) P V S Jagan Mohan Rao, Council Member of the Institute assumed office as President of South Asian Federation of Accountants (SAFA) for the year 2019 w.e.f. January 1, 2019.
- CMA Dr. PVS Jagan Mohan Rao, Council Member selected as the member of PAIB Committee of IFAC for a term of three years.
- CMA Sanjay Gupta, Council Member selected as the Member of Public Sector Financial Management Committee (PSFMC) of CAPA (Confederation of Asian & Pacific Accountants)

CMA Course Fee Concession Scheme for Defence Personnel and their son/daughter

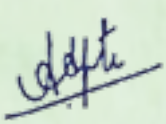
To commemorate 75 years of journey of the Institute, Council of the Institute, as a tribute to the Defense Forces who are sacrificing their lives for defending our great country, has announced 50% Concession in CMA Course fee for the Persons serving in the Army/Navy/Air Forces and their Children. This fee concession applies to Foundation/ CAT/Intermediate and Final Course of the Institute. The Institute salutes the brave soldiers.

Other achievements/initiatives:

- **Setting up over 100 GST Help Desk** to respond to various queries on GST to be raised by the public at large, members and students
- Institute played a significant role in adding value to MCA's initiative by conducting survey on **Ease of Doing Business** among the stakeholders in the areas of (a) start of business, (b) protecting minority interest, (c) resolving insolvency and submitting report to MCA before the World Bank Survey.
- **BENEVOLENT FUND:** The Council approved to fix the Annual assistance from the Institute to the Benevolent Fund for the Members of The Institute of Cost and Works Accountants of India at Rs.10 lakhs or 2% of the surplus of the HQrs and Delhi Office whichever is higher. Also as a onetime contribution an amount of Rs. 1 Crore has been paid to Benevolent Fund.
- Institute organised its **first Global Student's Summit 2K19** on the theme "CMAs - Today's Student, Tomorrow's Executive" at Thrissur, Kerala
- CAT Directorate began the **online admissions of CAT Course**

I wish prosperity and happiness to members, students and their family on the occasion of Id-Ul-Fitar and pray for the success in all of their endeavors.

Thanking you!!!



Warm Regards,

CMA Amit A. Apte
1st June 2019

INDUSTRY 4.0: OVERVIEW, PRACTICES AND ROLE OF MANAGEMENT ACCOUNTANTS

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Abstract

Industry 4.0 is the fourth revolutionary wave in the manufacturing arena. It refers to the trend of using automation and data exchangein manufacturing technologies. The management accountants need to embrace and exploit this wave of digital transformation along the value chain of business. It throws up a plethora of opportunities. At the same time, it demands for an apt ecosystem so that the benefits are unleashed. The present article has four sections: Overview of Industry 4.0, initiatives and practices, role of management accountants and conclusion. The study is based on secondary sources like reports, surveys, whitepapers, and research articles.

Overview of Industry 4.0:

Originated in Germany, Industry 4.0 encompasses the entire suite of cutting-edge technology; Internet of Things (IoT), Cloud Computing, Artificial Intelligence (AI), big data, data analytics, block chain technology, additive manufacturing (3D printing)and so on. The outcome is smart factory. The term Industry 4.0 was coined by the BMBF in Germany (Federal Ministry of Education and Research). It was a consequence of a project by the German government to focus on the digitization of the manufacturing industry. This term was made public at the Hannover MesseIndustrie (HMI Fair) in 2011, in which it was demonstrated how cyber-physical systems could be responsible for the evolution of new business models, and thus make possible a paradigm shift in the industrial automation sector.This new industrial age is affecting the industry structure, competition rules and customers' demands (Gilchrist, 2016; Bartodziej, 2017).

Julian Marius Müller, (2019) cites that besides the German Industry 4.0 initiative, similar initiatives have been developed. The European Union has started a public-private partnership under the title "Factories of the Future" to achieve sustainable and competitive production (European Commission, 2016). In the USA, similar efforts are underway through the Industrial Internet Consortium. In China, the "Internet Plus initiative" and "Made in China 2025" represent programs comparable to Industry 4.0, and are among several approaches worldwide (Liao et al., 2017; Müller and Voigt, 2018).

According to Robert H. Brown and Prasad Satyavolu, (2017), new automated systems, in concert with manned systems, create new outcomes by better integrating all participants – suppliers, partners, materials scientists, machinists and heads of safety – through digital approaches.

World-renowned economist Klaus Schwab (2017), Founder and Executive Chairman of the World Economic Forum, explains that we have an opportunity to shape the fourth industrial revolution, which will fundamentally alter how we live and work.

Blanchet, Rinn and, Dujin(2016) conclude that Germany is the only country where the transition to Industry 4.0 has been accompanied by significant improvements in the return on capital employed (ROCE) over the last 15 years. Despite a slight drop in employment (9 per cent), value added grew by 80 per cent between 2000 and 2014, while profits increased by 158 per cent. Investments and depreciation remained stable over the same period, with a more efficient use of assets. The rate of use of production equipment grew from 85 per cent in 1998 to 95 per cent in 2014. As a result, Germany's ROCE climbed from 12 per cent in 2000 to over 30 per cent in 2014.

Kagermann et al., (2013) observe that in addition to securing Germany's industrial position in the world through efficient value creation, Industry 4.0 intends to provide flexibility and customization of products and services. Ecological and social benefits, such as reduced energy consumption, waste reduction and new, adaptive work environments, also will be achieved through Industry 4.0.

Industry 4.0: Initiatives and Practices:

The initiatives for enabling the Industry 4.0 can be seen at the policy makers' levels, industry forums, international organisationsand also at the individual corporate houses. The best practices at the company levels provide the benchmark for others to emulate. For the sake of brevity, the initiatives and practices are captured in the following table.

Table 1: Industry 4.0 Initiatives and Practices

Companies & Forums	Initiatives / Practices
World Economic Forum (WEF)	Establishment of Center for Fourth Industrial Revolution (C4IR) in the Silicon Valley at San Francisco
WEF and RIL	WEF and RIL jointly will set up a Centerfor the Fourth Industrial Revolution inMumbai
European Commission	Initiation of Digital Single Market package on 19 April 2016
NITI Aayog and ABB	Jointly organized workshop for facilitating adoption of Artificial Intelligence (AI) technologies by MSMEs
Government of India (GOI)	Make in India: Developing 100 smart cities under Smart Cities Mission, Digital India: provision of government services electronically, Skill India, GOI is proposing to establish the National Centre on Artificial Intelligence
Indian Institute of Science (IISc)	IIScis building India's first smart factory in Bengaluru with a seed funding from the Boeing Company

Tata Steel	Has identified 'Industry 4.0' as strategic imperative toattain 'Smart Factory' status with enhanced productivity, customercentricity and sustainable performance. Its new initiativesacross India, Europe and other geographies are aligned to pursueoperational excellence through programmes likeShikhar25 in India, Delivering our Future in the UK andSustainable Profit Programme in the Netherlands.
L&T	L&T-Nxt: focuses on the areas of artificial intelligence (AI), internet ofthings (IoT), virtual reality, augmented reality, geospatial solutions andcyber security, automation solutions to industrial clients byleveraging its diverse customer base and domain knowledge expertise.
Bosch	Assists its vendors, many of whom are SMEs, to experiment with and determine which 'Industry 4.0'technologies will enhance their competitiveness. Industry 4.0 is 'pulled in' by people, not 'pushed on' to them.
SKF	Shopfloor InformationDigitalization, Sensorization for processmonitoring and control, Automation and Advanced Logistics-Automated Guided Vehicles (AGV) to improve logistics, Energy and Maintenance, Intelligent Product: Data Matrix- Autonomous Customization processesdriven by Data Matrix, Additive manufacturing forspecial cage prototipation and Machine's tooling manufacturing

Source: Self Compiled

Cornelius Baur and Dominik Wee (2015) of McKinsey have brought out the following compass which consists of eight basic value drivers and 26 practical Industry 4.0 levers. This provides a benchmark of bouquet of offerings that Industry 4.0 can offer.

1 Maintenance, Repair and Operations
Source: https://www.mckinsey.com/business-functions/operations/our-insights/manufacturings-next-act

Role of Management Accountants:

According to CGMA (2018), the finance professionals will be judged on how well they work with, and complement, robotic process automation (RPA) and algorithms. Further CGMA (2018) report says that the finance professionals bring the context and human story to the abstract output generated by the technology.

As per R Kohavi& S Thomke (2017), the role of the finance professional, therefore, shifts from one of knowledge collection and creation, to the interpretation of meaning and curating the information outputs produced by the software solution.

The management accountants can leverage Industry 4.0 platform for exploiting the profit drivers. The profit drivers are: (1) Asset Management (2) Cost Management (3) Leverage Management and (4) Tax Management. The following table provides the role in specific terms.

Table 2: Role of Management Accountants

Elements of Industry 4.0	Significance	Role of Management Accountants
Big data and Analytics	To get insight into patterns of business operations which is humanly not possible	Make use of business analytics for aiding decision making and optimisation of physical and human resources
IoT - Internet of Things	Connecting devices for better operations, augmented Intelligencepredictive maintenance, timely scheduling	Pricing; insurance premium on policies depending on the usage pattern/risk assessment
Artificial Intelligence (AI)	Automation, Robotics, Cobots and machine learning, shortening production cycles, ease, brevity and speed of doing business and revolutionising business models and innovation	Project management, logistics and supply chain solutions, FMCG distributions, risk mitigation and strategy formulations
Quantum Computing	Speed and accurate computations	Relieves the finance professionals from mundane work so that of strategic business development
Digital Manufacturing	Better network among business partners	Leveraging on it for for value creation across the value chain
Blockchain	Decentralised data base which is fast, transparent, cost effective and temper proof	Participate in solution development using Blockchain and help in applications in BFSI and real estate sectors

Source: Self Compiled

The management accountants must take note of the following emerging trends in business so as to realise the upside potential of Industry 4.0 wave:

- No more linear growth model
- Democratisation of information
- Platform based service offerings and not product based. Eg: Ola, Uber, Airbnb
- Move towards service and subscription model from sales model
- Technology being the main driver of change and occupying the center stage

Conclusion:

The management accountants have to appreciate the role of Industry 4.0 and its implications across the value chain and the way the business partners (customers, suppliers, bankers, insurance companies, logistic and supply chain partners, investors, employees, policy makers, government, competitors etc) exchange, partner and network each other. The management accountants will have to upskill and continuously gain insight of technological disruptions, update, reinvent and renovate their technology skills. Industry 4.0 digitally transforms the industry and the large organisations are leveraging on it. MSMEs should follow suit for taking on competition from the large and established incumbents. MA

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INDUSTRY 4 READINESS:
EVIDENCES FROM INDIA

Abstract

India has already begun its transition to Industry 4. None of the companies in India are fully Industry 4 ready. However, the companies that have adopted Industry 4 and are making considerable improvements both in processes, structures and routines are not few in number. The paper tries to look into India's readiness towards Industry 4 through evidences from the companies operating in India.

It is well accepted that over any reasonable length of time, in many industries competition can be viewed as a process driven by innovation (Hill and Jones, 2009). Innovation is frequently the major factor in industry evolution and causes the movement through the industry life cycle. The Global Innovation Index (GII) aims to capture the multi dimensional facets of innovation. GII is now being used by almost 126 economies (high, medium and low income countries) to improve innovation performance. India's rank on the GII has improved from 60 in 2017 to 57 in 2018. India has been consistently climbing the GII ranking for the past two years (Global Innovation Index, 2018). In India it is clearly observed that the manufacturing sector namely; IT manufacturing sector, auto-components manufacturing sector, small components and manufacturing sector, automotive sector have become very innovative. Indian companies have increasingly been spending on R&D and have developed many innovative technologies. Moreover, the government initiatives to boost R&D have made India an innovation destination of the East. According to Indian Brand Equity Foundation (IBEF), the Government of India has set a target of increasing the contribution of the manufacturing sector to the GDP to 25% from 16% currently by 2025. IBEF projects that that IoT market of India is going to grow at a compound annual growth rate of more than 28% during 2015-2020 (Thornton, 2017). The Government of India has taken a lot of initiatives in this regard namely, the Make in India and Green Corridors.

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The paper tries to look into India's readiness towards Industry 4 through evidences from the companies operating in India. The number of companies adopting Industry 4 in India is increasing however the author has selected some of the companies to understand India's readiness towards Industry 4.

Industry 4: The Concept

The invention of the steam engine in 1760 marked the beginning of the first industrial revolution. Coal was the main source of energy and trains were the main means of transportation. The most dominant industries were textile and steel in terms of employment, value of output, and capital invested. The invention of the internal combustion in 1900 marked the beginning of the second industrial revolution Rapid industrialization happened during this period using oil and electricity to power mass production. The implementation of electronics and information technology to automate production in 1960 led to the third industrial revolution. The fourth industrial revolution now involves computer generated product design and three dimensional (3D) printing, which can create solids object by building up successive layers of materials. The Industry 4 or the 4th industrial revolution marks its beginning from 2014 with real time, self optimising connected systems. (Xu, David and Kim, 2018).

Industry 4 is a German initiative aimed at creating smart factories. The concept is very similar to the Japanese e-@

Factory. Industry 4 or the fourth industrial revolution is defined by digitally-enabled smart factories. It has highly connected systems that create a fully automated value chain. The nine technologies that are transforming industrial production under Industry 4 are Big Data Analytics (BDA), autonomous robots, Internet of Things, horizontal and vertical system integration, the cloud, cyber security, simulation, additive manufacturing and augmented reality.

Industry 4 marks an Intelligent Manufacturing System (IMS) and uses service-oriented architecture (SOA). It may be mentioned that while Industry 3 focused on automation of single machine and process, Industry 4 concentrates on end-to-end digitisation of all physical assets and their integration into the digital eco system with value chain partners.

The objective of Industry 4 is to bring about highly integrated human–machine cooperation in the industrial ecosystem through cyber physical production system integrating communications, IT, data and physical elements. The main components of Industry 4 includes strategy and organisation, smart factory, smart operations, smart products, data driven services and employees. Industry 4 offers an opportunity to develop new business models as well as improving the current models by using digital technologies. Smart products are the basis of smart factory and smart operations. These products are capable of collecting data on their environment and their own status with the help of sensors, Radio Frequency Identification (RFID), communication interface, etc. Data driven services call for equipping physical products with physical IT so that they can send, receive, or process the information needed for the operational processes.

Industry 4: Evidences from India

India has already begun its transition to Industry 4. World Economic Forum opened a Centre for the Fourth Industrial Revolution in Maharashtra, India in 2018. The focus area of the Centre will be block chain and artificial intelligence (AI).

It may be mentioned that none of the companies in India are fully Industry 4 ready. However, the companies that have adopted Industry 4 and are making considerable improvements both in processes, structures and routines are not few. Some of the notable ones are as follows:

Asian Paints with the help of ABB has set up a Greenfield plant for decorative paints at Khandala. Asian Paints selected ABB for the Manufacturing Execution Systems (MES) and Decision Control Systems (DCS) solutions for its new plant. The plant has almost 42000 input and output devices (I/Os) that controls and integrates plant processes from raw material receipt, storage and transportation to paint manufacture and packing. ABB solutions not only reduced manpower required to operate the plant and production cycle time, but also significantly cut the downtime. [https://new.abb.com/docs/librariesprovider20/contact-magazine/contact-industry4-0-a-connected-world.pdf?sfvrsn=2]

In order expand industrial IoT in the country, L&T subsidiary L&T Technology Services Limited (LTTS) and US- based computer software company PTC unveiled a Centre of Excellence in Bengaluru (Business Standard , July 12, 2017). The Centre will demonstrate digital transformations for companies globally. Its areas will include application lifecycle management (ALM), product lifecycle management (PLM), service lifecycle management (SLM), manufacturing operations management (MOM) and connected manufacturing. L&T heavy engineering facilities at Hazira, Powai, Ranoli, Talegaon and Coimbatore for defence, aerospace and nuclear industries conform to Industry 4 specifications. L&T uses real time data of plant and machinery from its construction site to improve performance. The smallest of data, such as the amount of electricity consumed by machines or the weight hauled by a crane at a construction site, are put together and analysed, helping L&T take big decisions to improve performance. L&T-Nxt is a strategic initiative taken by L&T that will focus on AI, virtual reality, augmented reality, geo spatial solutions and cyber security to offer automation solutions to industrial clients. (The Economic Times, 3rd March, 2019)

Bosch's Bidadi Plant in Bangaluru uses 'Cobots' which work alongside humans. They can sense when a human comes near them and stop functioning. One of the very successful projects of Bosch's Bidadi Plant has been the spindle monitoring system. Vibrational sensors can now predict when the spindles are likely to fail. This helps the company to schedule maintenance without disrupting the workflow. Bidadi is a Greenfield factory. [Business Today Magazine (January, 2019)]

The Tata Group's power utility has developed its own digital platform, helping customers better manage consumption with real-time information and improving efficiency at its own plants. It is now offering this service to other utilities. Voltas is working with Tata Consultancy Services (TCS) to offer IoT based solutions to offer better chiller maintenance services to customers.

[https//economictimes.indiatimes.

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Axis Bank has entered into a partnership agreement with Active.Ai leading to a smooth seamless fund transfer experience for its customers through conversation. [https://active.ai/in-the-news/]

Mondalez India's plant at Sri City, Andhra Pradesh packs almost 6300 chocolate bars a minute. Mondalez India calls its Sri City plant an integrated digital factory. [Business Today Magazine (January, 2019)]

Bajaj Auto commenced automation in 2010 and today uses 100-120 'Cobots' (Collaborative Robots) in its production facilities. Ford, in the Sanand plant, manages to operate the assembly lines and body shop with the help of 437 robots. Tata motors, in its Sanand plant, manufacture Nano with the help of 100 robots. Maruti Suzuki uses around 1700 robots to manage 7 process shops and 5 assembly lines. Renault uses automation of business process to prevent accidents. Siemens worked with Mahindra & Mahindra to set up a digitalised platform that quickly translates market requirements into a viable vehicle platform, including reducing the time taken for new product launches (Thornton, 2017). All major automotive manufacturers are now developing self-driving autonomous vehicles and plan to release partly, if not fully, automated cars in the mid 2020's. This will be made possible only through AI.

The Siemens factory at Kalwa, Mumbai introduced PLM software. This helped the company to be interconnected with a portal and a manufacturing execution system MES). Machines are connected via sensors and a cloud computing based IoT operating system. [Business Today Magazine (January, 2019)]

General Electric's (GE's) Chakan plant near Pune has its Enterprise Resource Planning (ERP) linked to MES. The machines in GE plant also uses sensor to send early signals of machine breakdown. [Business Today Magazine (January, 2019)]

Swiggy, restaurant aggregator uses AI to help its systems keep pace with rapid growth. The firm has intensified its focus on building a strong data repository. This acts as a catalyst towards the adoption of AI.

[https//economictimes.indiatimes.com/articleshow/67919349.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst]

Conclusion

In support of The GOI's missions of 'Start up India' and 'Make in India', The India Innovation Growth Programme (IIGP) 2.0 has been launched. It is a unique tripartite initiative of The Department of Science and Technology, Government of India, Lockheed Martin and Tata trusts. The objective is to enhance the Indian innovation ecosystem by enabling innovators and entrepreneurs through the stages of ideation and innovation and to develop technology–based solutions for tomorrow. The two factors that work for India's advantage are good telecom connectivity and it is an information technology giant. Although the Indian companies are fast embracing technology yet, it faces severe challenges in terms of inflexibility, unavailability of skilled work force, cyber security threat and the cost of up skilling the workers to embrace new technology and a more complex industrial eco system.

Industry 4 brings along with it many challenges, which if not taken care of can cause severe disruptions both for the organisation as well as for the entire economy. The causes of concern are massive job displacement; replacement of low skilled and low wage jobs by computers and digitisation; possible threats from dissatisfied employees, human error, hackers and cyber threats; vulnerability of being connected to anything and everything through IoT and finally fixing moral values to artificial systems.

The early adopters of Industry 4 will have the first mover advantages and those who fail to take it will be left behind. Failure to adapt may have severe consequences on organisations. The new wave of industrial revolution will set new norms, standards, practices and procedures. The competitive landscape will alter for industries and the survival of the fittest will be the order of the future. MA

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Call for Research Papers/Articles

We invite you to contribute research paper/article for "Research Bulletin", a peer-reviewed Quarterly Journal of The Institute of Cost Accountants of India. The aim of this bulletin is to share innovative achievements and practical experiences from diverse domains of management, from researchers, practitioners, academicians and professionals. This bulletin is dedicated to publish high quality research papers providing meaningful insights into the management content both in Indian as well as global context.

Guidelines to submit full Paper

- Soft Copy of the full paper should be submitted in double space, 12 font size, Times New Roman, keeping a margin of 1 inch in four sides, MS Word (.doc) format.
- Each paper should be preferably within 5000 words including all.
- An abstract of not more than 150 words should be attached.
- The cover page should contain the title of the paper, author's name, designation, official address, contact phone numbers, e-mail address.

Papers are invited on the following sub-topics, but not limited to:

- Foreign Direct Investment (FDI): a Major Driver of Economic Growth
- Smart & Digital Future for the Indian Manufacturing Industry
- Industry 4.0 and its impact on India's job creation
- Future workforce in the age of Artificial Intelligence (AI)
- Startups: redefining healthcare scenario in India
- Micro, Small & Medium Enterprises (MSMEs) – Perspectives, Challenges & Opportunities
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INDUSTRY 4.0 – A STUDY ON INNOVATIVE JOURNEY FROM GERMANY TO INDIA

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Abstract

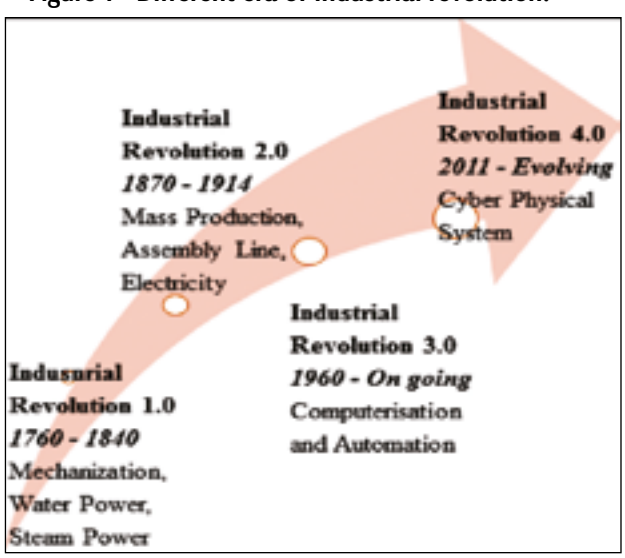
Industry 4.0 is representing the high autonomous technological era where production is capable of taking place it-self own, as machines are intelligent and supported by drones in digital environment, where internet of things, services and information build a communication network among men, machines and material. Not only manufacturing industry, but trading firms (logistics and distribution majorly) as well as services industry is expected to be impacted by industry 4.0. Beyond the changes in processes, major changes are also expected in the workforce role/s as new skills are required. This article is an attempt to study the innovative journey of industry 4.0 form its origin in Germany and now scope in India.

The fourth Industrial Revolution is the term that describe our present technological age. It defined as the fourth industrial era since initial industrial revolution of the 18th century.

Initially it will be focus up-on the artificial intelligence and machine learning. Key elements of fourth industrial revolution are the fusion of technology, ranging from physical, digital to biological sphere. It is marked by diversified technological break-through that brings together field of robotics, artificial intelligence, nanotechnology, biotechnology and the host of others. Industry 4.0 can be described as huge changes brought about by the smart Technologies.

Evolution of Industry 4.0

Figure 1 - Different era of industrial revolution.



Industrial revolution 1.0 bring out machines with stream power, whereas 2nd generation of industrial revolution rolled out concept of assembly line and replace stream power with electricity; and 3rd industrial revolution witnessed the use of computers to automate the processes. Now 4th era of industrial revolution will make machine intelligent by using internet of things, services and knowledge.

Evolution of Industry 4.0 in Germany

The term "Industry 4.0", shortened to "I4.0" originates from a project in the high-tech strategy of the German government. At the Hannover Fair in 2011, the term "Industry 4.0" was revived, then a working group under guidance of Siegfried Dais (from Robert Bosch GmbH) and Henning Kagermann (from German Academy of Science and Engineering). At 2013s' Hannover Fair (On 8 April 2013) this working group submit their final report.

Industry 4.0 is ushering in a new era of industrial production which is finding its way into all Industries. Within the German economy, Science and Politics are working together to make industry 4.0 reality.

It encompasses a complete restructuring of the production process transforming analogue and centralised workflows into digital and decentralised production processes.

Comprehensive digitalisation will decrease production cost, be resource efficient and customer oriented; at the same time the new business model, innovative products and the new services will be created. Machinery and the plant engineering along with the electronic industry are among the strongest industries in the Germany.

Internet driven self controlling and sensor aided protection systems will shape the future of the machine based on the cyber-physical production systems order will be able to stay them self independently through entire value chains.

Twin efforts in Germany towards mastering Industry 4.0

German companies and Research Institutes are working together to create the software communication between People, Machine logistic and Products. Communication must be achieved in the real time, this way all production process ranging from supply to delivery can be optimised and customised.

As per Dr. Ing Jachen Schlick, Head of Cyber Physical Systems, Wittenstein AG, 'At one end of the chain, we have the smart factory improving production quality at the other we have the smart products and data driven services'. While we are very well positioned regarding the smart products we have to further develop on know-how in field of data driven services, this is where I see great potential for future revenue.

Security aspects of communication and information – an integral challenge for making Industry 4.0 risk free

In the internet of the things, product and devices are automatically identified by the intelligent census. They are linked to each other via Internet, in this way valuable information is obtained and analysed.

However the security of this information is essential for a successful and efficient industry 4.0. This is key security issue for research at IBM

Martina Koederitz, General Manager IBM Germany, said in one her interview that 'Internet of things and Industry 4.0 create the Global supply chain and turning our world into the information economy. As a result 'Global Security and Data Standards' are required only then we can ensure that the market develop confidence in the new products and services and that companies can pass this confidence on to the customer due to specialised vocational training and the superb network of the university in Germany including the research facilities that deals with the industry 4.0 combined with our experience and quality, Germany is an ideal position to attract the best and the brightest in the future'.

German Research Centre for Artificial Intelligence and efforts by other research institutes of Germany – Standardisation of communication/languages among machines

German research institutes are amongst the worlds' leading Pioneer in taking on challenges of industry 4.0. The 'German Research Centre for Artificial Intelligence' and the smart factory 'Kaiser's Louden' have partnered with industry to build the first cross vendor industry 4.0 installation. This demonstrates how sophisticated information technologies are integrated into the factory automation.

Professor Dr. H. C. Detlef Zuhlke, Director - Innovation Factory Systems at German Research Centre for Artificial Intelligence said 'Industry 4.0 is a networking vision, It only works in a network; we need to connect partners within the network and partners must speak the same language is not only apply to the human Communications but also to the technologies

All machines have to speak the same language, as a result we have to create the standard and Standards can only be developed together. This is the one of the focal point we are addressing.

The 'Fraunhofer Institute' is internationally renowned for its comprehensive industry 4.0 research. Intelligent production lines for automotive industry are being developed at the Fraunhofer IWU. For example, sensor networks allow for the flexible production of the different car body styles of the same production line.

As per view expressed by Professor Dr. Ing Reimund Neugebauer, President of the Fraunhofer, 'In the future we will have more flexible processes. Think of automobile sectors for instant from a supplier of steel that make the car body parts, right through to the car dealership, so we will see cost reductions, shorter time to market and great potential for optimisation in general.' 'If we compare the data across the different industry sectors for instant and connect vehicle and metrological sensors with the weather forecast or insurance companies, we gain new insights and develop entirely new business model by centrally analyse and correlated these large amount of data fairly'

Role of German federal government in uplifting industry 4.0 in Germany

As per one of interview with Brigitte Zypries, the Parliamentary State Secretary at the Federal Ministry for Economics Affair and Energy, 'for the Government of Federal Republic of Germany, Industry 4.0 is key element in securing Germany status as a manufacturing location. The business you fought that Germany's key advantages are its highly developed industrial landscape and industries which exist here and not in the other countries. Therefore Germany has excellent condition for the development of the industry 4.0

Role of 'Germany Trade and Invest – An Investment Promotion Agency' in uplifting industry 4.0 in Germany

'Germany Trade and Invest' is the investment promotion agency of Federal Republic of Germany. As per Mr. Achim Harting, MD - Investment consulting at 'Germany Trade and Invest' there are many specific programs to promote the development towards industry 4.0.

The people at 'Germany Trade and Invest' are the first point of the contact for the international companies looking to enter into the German market. It help the companies provide your strategy for entering the market in Germany along with German tax and the legal information as well as the information on possible European Union funding, federal funding or the funding from the federal States.

Prospect of Investments in Germany due to Industry 4.0

Investments amounting to 40 billion euro are planned by the year 2020. Within next five years more than 80% of German companies will be fully digitalised. Their value chain experts expected an increase in efficiency of the 18% and cost reduction of about 13%

Through the innovative new products as well as the new

services and the new Business models an additional growth potential of upto 425 billion euro is expected by year 2025.

Initiative at GE Global Research Centre

Figure 2 Global Research Center in Niskayuna, New York

GE Global Research Centre *(established as the General Electric Research Laboratory in Schenectady in 1900 and relocated to Niskayuna in 1955)* is developing software and methods for analysing digital industrial application data in future production will involve machine and objects being equipped with sensors that continuously collect data about status location work status and usage patterns when combined and analysed accordingly this data will lead to much more efficient processes and the optimal and preventive maintenance of the and equipment that help to identify the sources of errors quickly and save even more cost

As per Dr Dietmar Tourbier, Technology Leader - Electrical Services at GE Global Research Centre 'This industrial internet called industry 4.0 is a Quantum leap in the networking of people, machine and data. This enables us to improve the efficiency of a product throughout its entire life cycle'.

In future production processes; the men, machine/s and product/s will be communicating with each other allowing for self organised production process.

The product itself will become the crucial information carrier by using the industry 4.0 technologies they will autonomously decide where and how they are produced through.

Scope of Industry 4.0 in India

On 11th October 2018 Hon'ble Prime Minister Mr Narendra Modi give an institutional shape to the expression, while launching the centre for fourth industrial revolution in Maharashtra as part of the initiative of world economic forum.

India is fourth country after the US, China and Japan to the network, where the World Economic Forum opens the centre for fourth Industrial Revolution. This will help the India to embark the massive digital and technological transformation.

It will work in the collaboration with the 'NITI Aayog', Business Leaders, Start-ups and academia to co-design the new policies protocol for emerging technologies with the initial focus on the Artificial Intelligence, Block chain and Drones

According to Prime Minister Modi the component of the fourth Industrial Revolution will change the nature of the jobs and provide the more opportunity to the youth you also added it will take India to New Heights and the social as well as economic reforms he shows the confidence India's contribution to the next Industrial Revolution would be astonishing.

Industrial Revolution 4.0 forming India in

1. Elevating poverty
2. Better and the low cost Healthcare
3. Enhancing farmer's income
4. Providing new technology at equipment to farmers
5. Strengthening infrastructure improving connectivity
6. Artificial intelligence to empower and enable especially abled people
7. Improving ease of living and ease of doing business

India has also recently announced its Drone policy which will enable the Drone mapping and the other application as per the fourth industrial revolution.

Conclusion

As per Professor Klaus Schwab, who is founder and director at 'World Economic Forum' and also the author of 4th industrial revolution 'the new age is differentiated by the speed of technological breakthrough, the persuasiveness of scope and tremendous impact of new systems'.

4th industrial revolution has broken the distinction between men, material and intelligence, making machine intelligent; Hence Industry 4.0 is era of unlimited opportunities for Trade and Commerce. MA

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LEAPFROGGING EDUCATION FOR LEVERAGING INDIA'S DEMOGRAPHIC DIVIDEND AND MEETING INDUSTRY 4.0 NEEDS

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Abstract

Education in the Fourth Industrial Revolution is a challenging process which will increase in complexity phenomenally, particularly due to increased longevity, the relentless pace of change, the overwhelming use of digital technology and the changing pedagogy of education. Contemporary education must be redesigned to support Industry 4.0 which, while creating new jobs will eliminate some of the existing jobs thus making it imperative for education to prepare students for a future that doesn't yet exist. Focusing on critical and creative thinking, communication and collaborative skills, cognitive flexibility to deal with complexity all centered around compassion to produce meaningful results, while embracing technology, will be the real challenge for Education 4.0. This paper attempts to emphasize the need for India to leverage its demographic dividend for economic growth through the acquisition of newer skill sets to meet the changing needs of the industry using the new equation to lifelong learning: 5c+2m+1r >3r

Schools are doing education 1.0, talking about doing education 2.0 when they should be planning and implementing education 3.0, while gearing up for education 4.0.

Jackie Gerstein, Ed. D

Education and Higher Education in the Fourth Industrial Revolution (H.E.4.0)is a complex, challenging and exhilarating opportunity which has the potential to transform the education sector and system in the world in general and India in particular, for the better. The future of learning will be dramatically different in schools, colleges and throughout life. With increased longevity becoming the norm, the proportion of time one spends educating and re-educating one's self to cope with the relentless pace of change and innovation will increase phenomenally.The current system of education was born from the needs of the industrial revolution. According to Sir Ken Robinson, a British author, speaker and international advisor on education, the main purpose of education 1.0, was to take the fairly uneducated farm workers and produce factory workers who would be able to work on assembly lines. Thus one had to be able to repeat tasks, read, write and do simple arithmetic. Creativity was not necessary and factory owners required docile, agreeable, workers who would show up on time and do what their managers told them. Sitting in a classroom quietly, with teachers in front of them allowing no interaction with their classmates was good training for producing workers for assembly line work during industry 1.0. This ageing system of education, replicated the old factory system or prison system where students wore uniforms, had roll calls, timetable, no interactions with fellow workers or jailors and followed assembly and cellular structure of sitting. Education 1.0 stifled creativity since student's acquisition of knowledge was limited to the subject matter that they could learn and memorize, it valued efficiency over mastery and promoted incomplete understanding of the subject matter.

Industry 4.0

The rise of the new digital technology commonly known as Industry 4.0 is a transformation that makes it possible to gather, analyze and interpret information across machines resulting in greater efficiency and productivity. Industry 4.0 is a blend of Advanced Analytics, Big Data, Robotics and Animation, Artificial Intelligence, Internet of Things and Process Digitization across the business value chain. Industry 4.0 improves performance, gains a competitive edge for Organisations and transforms the industrial workforce, creating value that far exceeds the single digit cost savings that manufacturers currently pursue. However, real value is achieved when manufacturers maximize the impact of the advances of Industry 4.0 by combining most, if not all aspects of these advances together, rather than implementing them in isolation.Industry 4.0 is said to have been ushered in by advancement in robotics, virtual reality, cloud technology, big data, artificial intelligence, the internet of things (IOT) and other technologies. Despite the fact that we are now on the threshold of industry 4.0, the education revolution has been too slow to adapt to the technological advances and their impact on our work and social life. With the massification of higher education occurring worldwide over the past three decades, the design of the education system has failed to ensure skilled based quality education. There is an urgent need to redesign contemporary education so as to create an education system that supports the fourth industrial revolution.

Why Industry 4.0?

While most Organizations realize the need and potential for moving towards Industry 4.0, the law of Inertia and a few conflicting signals that arise from the use of this, hinder their full appreciation of its value to them. These aspects suggest that while Industry 4.0 is a priority for success, it is not yet an imperative for all industries except perhaps those that are cost sensitive. This ambivalent view results in a fluctuating verdict as to whether the benefits of Industry 4.0 outweigh the challenges of incorporating it i.e. ultimately, whether it is more real or hype! Its benefits are perceived to be more in line with improving manufacturing productivity through an improvement in quality and reducing costs rather than through any real revenue growth. Additionally, implementation across industry is not progressing at an even pace and this changeover presents many obstacles but few solutions, making its implementation even more of an issue for debate.

However, the value of Industry 4.0 is very real and the question is no longer whether to accept and incorporate Industry 4.0, but when and how to do so. For Indian industry too, the same case holds good and according to Mc Kinsey, if Indian companies adopt Industry 4.0 across functions such as manufacturing, supply chain logistics and procurement, they can enhance their operating profits by 40 % at less than 10% of planned capital expenditure.

Higher Education and its Evolution

The connection between Education and History is often understood to be a one way system where education is expected to fit into economic, social and political trends rather than challenging or opposing them for the development of society. Higher Education has evolved through the stages of Elite to Mass to Post-Massification. While Elite catered to the minuscule group of elite and attempted to mould the minds and characters of the ruling classes, Mass attempted to provide higher education to many people with the ultimate aim of targeting the transfer of skills and preparation for a wide variety of technical and economic roles and Post-massification basically sees an internationalization of both

students and staff, thus aimed at adapting populations to rapid social and technological change. However, irrespective of the era or location, the core mission of higher education remains ensuring that the three pronged goals of teaching i.e. ensuring the quality of learning via teaching; research i.e. providing students with the latest knowledge through exploratory research and service i.e. sustaining the development of society via service, are achieved

Leapfrogging to Education 4.0:

Like the industrial revolution of the past, Industry 4.0 will create new jobs and will eliminate some of the existing jobs. In this context, it is imperative to impart education to youngsters which will prepare them for a future that doesn't yet exist. In the era of Industry 4.0, Education 4.0 must be able to produce graduates with the ability to think critically and be creative. They will need cognitive flexibility to deal with complexity. Communication and collaborative skills will be far more important than ever.

With the advent of the internet, smart classrooms, online exams, internationalization of education and the upheaval in the job market, the current system of education needs revamping to handle the essential global and technological competencies of the 21st century. The challenge of adapting the existing traditional educational environment to meet the changing business and student needs is to prepare workers with skills that can cope with innovation as well as enable them to trade on their uniquely human capabilities. This challenge involves embracing technology as well as the uniqueness of being human, in all its forms consequently creating the need for Education 4.0.

Education 4.0 is the unique response of Education to Industry 4.0 and since creativity is the cornerstone of Education 4.0, it follows that creativity and innovation will be the name of the game for Education 4.0. Education 4.0 emphasizes the need for training students to meet and embrace challenges at the workplace, head on. For Education 4.0 to be contemplated, accepted and embraced as a matter of priority and imperativeness, it is essential that the content and context of education, at all levels, undergo a sea transformation in the coming years.

Learning irrespective of the location, the methodology, the pedagogy or the users has to break free of the old mind set. Learning and education need to be transformed from a formal time bound process to a lifelong process i.e. from childhood schooling and higher education to continuous learning at the work place and leaning to play a productive role in society. For this, Education 4.0, requires a paradigm shift – a new vision for learning where it is more important to know why a certain learning (a skill or knowledge) is important and then where to find it , rather than the current system of learning anything and everything indiscriminately. This will require a more customized approach to learning, a self-determined approach to how, what, when and where learning suits each individual. Most importantly, it will require a paradigm shift in the mindset and approach of teachers from being **"a Sage on stage" to "Guide on side" to "Meddler in the middle"** (as coined by Educationalist Erica McWilliam)where in all learning comes from collaboration i.e. learning with each other and from each other.

Education 4.0 will be characterized by several key trends:

- Diverse time and place of learning with e-learning tools creating opportunities for remote, self-paced learning.
- Flipped classrooms where theoretical learning takes place outside the classroom while practical learning would take place face to face i.e. interactively.
- Personalized learning which allows/offers opportunities to practice till required level of skill or expertise is achieved using study tools that adapt to student capacity and capability.
- Positive reinforcement throughout the leaning experience which increases academic confidence.
- Free choice for students to modify the learning process with specific tools they consider necessary for their personal learning and learning characterized by flipped classrooms, Blended Learning and BYOD (Bring Your Own Device)
- Project based learning which will equip every student with skills, particularly Collaborative, Organizational and Time Management skillsthatthey can apply in diverse academic and work situations. Field experience will gain prominence and will be emphasized in courses for skills that can be acquired mainly through face to face interaction and solely require human knowledge.
- Data interpretation skills will take precedence over manual calculation with computers taking care of all statistical and mathematical calculations such that human reasoning and interpretation of such data to make logical inferences and identify trends will become fundamental to learning.
- Changes in examination systems such that exams validly measure what a student should be capable of when they enter a job with more emphasis on testing application skills through field projects rather than factual knowledge gained through the theoretical learning process.
- Participatory approach to curricula development whereby contemporary, relevant and realistic curricula

are developed through critical inputs from the students on the content and durability of their courses.

With the acceptance and implementation of Education 4.0, students will be empowered to develop a fuller range of competencies, skills and knowledge to unleash their creative potential. Curricula across all fields will be tweaked to offer more opportunities via internships, mentoring, projects and collaboration for the acquisition of real life skills and entry to courses will in turn be dependent on and positively influenced by prior level of field experience. Further, with technology being incorporated into every sphere of life and work and the increasing number of hours spent at work, this is the area where its impact will be felt most directly leading to changes in workplace design, productivity, human resources etc.

THE NEW EQUATION TO LIFELONG LEARNING: 5C+2M+1R >3R

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn"

Alvin Toffler

Since the phrase, the**"THREE R's"** was coined way back in 1825, reading, writing and arithmetic were the corner stone of education. However, the world is definitely not the same since then and the types of employment and life opportunities that young people will be facing as they leave schools and colleges in the very near future are immeasurably different.The Life Long Learning Skills that students require as a necessity if they are to survive in the future include are

Creativity and Innovation: All human beings are born creative,however, the trick is to continue to develop and nurture that creativity, instead of stifling it. If we look at the big picture, creativity is at the root of all human progression. We would make no progress in terms of medical and scientific breakthroughs, space missions, transportation, military sciences etc. without creativity. Creativity calls for curiosity, abstract thought, innovation and empathy. As Sir Ken Robinson said"creativity is as important in education as literacy and should be treated with the same status." Creativity is vital for education 4.0, because it encourages learners to explore, enquire, discover and think outside the box, while developing problem solving skills. Every organisation is constantly looking for newer ideas, in terms of efficiency, cost and value. A vitally important leadership skill is creativity and every education system should encourage learners through education to explore the world without boundaries and solve problems using divergent thinking.

Critical Thinking: It is the ability to analyse, conceptualise and apply thoughtin differing situations and contexts, so as to be innovative. In the world of leadership, there is rarely an easily identified correct answer or solution to a query. Leaders need to move away from step by step approach to problem solving. With the barrageinformation from various media and the vast resources at our fingertips,it is becoming increasingly difficult to cull valid, authentic and reliable information from those that are useless. The younger generation needs to be taught the skills to seek information that is reputable and factual. Critical thinking focuses on the Greek ideal of "living an examined life" which when practised, examines an argument along with its reasons, assumptions, evidence as well as the degree to which it supports the conclusion.

Collaborate: While Education 1.0 and Industry 1.0saw individuals working and studying alone, much of today's significant work is achieved through teamwork, where we use the 'wisdom of crowds'. Teaching children and youngsters early on, to share ideas, their books, their environment and equipping them with tools that allow them to widen their horizons, will later on help them to work more effectively with co-workers in the new economic environment.

Communication: Creative ideas and critical thinking will have little impact if an idea is not shared and communicated. A skilled communicator can diffuse a difficult situation and create a win – win situation,a skill that is prized by all employers today. Employees need to learn the art of listening, be empathetic and know how to communicate in different languages and across continents. With the exponential growth of social media,many of our human interactions have been replaced by digital interactions. It is therefore vitally important to recognise the importance of communication and be cognizant of socialising children in ways that promote healthy development of emotional intelligence and empathy through real interactions.

Compassion: Compassion should play a vital role in every aspect of learning. Without compassion, the 4 C's of learning viz. Creativity, Critical Thinking, Collaboration and Communication, risk of producing indifferent and sometimes shallow results. Compassion drives creativity and helps look at things from a different perspective. Collaboration, too hinges on the capacity of each member to interact with compassion towards the needs of their collaborators. Communication without compassion will have a reduced impact on creative energies unless they are directed at making the world a better place.

Motivating: There is an urgent need to make learning intrinsically motivating by making education participatory, helping students to set clear challenging goals. Learning should be made fun, playful, social and exploratory too and should be student centric with the teacher acting as a facilitator, to help, guide and direct the learning process.

Meaningful: Teaching should not only focus on just getting the lesson across but rather address the why of the problem.The student should be offered an opportunity to bring the real world into the classroom.Learners need to connect learning to their own lives in a meaningful way. Failure to offer students with compelling reasonsas to why learning should take place may result in the student lacking the motivation to learn.

Resilience: Resilience is the new buzzword in education. Learning and education need to emphasize building character skills just as much as they would,academic skills. With technological advancement and fast changing workforce, learners will need to have grit and resilience to cope with the changes. Many youngsters entering formal education today are likely to end up working in jobs that do not exist yet. Preparing students for these unchartered territories would mean that youngsters would need to have not just the right technological capabilities but also have social and emotional skills to face adversity. Resilience helps youngsters to successfully adapt to changes and thus actively engage in digital world.

Leveraging India's Demographic Dividend

India has one of the youngest populations in an ageing world with more than 50% of its population below the age of 25 years and more than 65% of its population below the age of 35 years. By 2020, it is expected that the average age of an Indian will be 29 years as compared to 37 years in China,45 for Europe and 49 for Japan. India can take absolute advantage of its youth bulge and its demographic dividend. The word youth bulge was first coined by a German social scientist Gunnar Heinsohn in the 90's to describe a phase in a country's demographic transition. Today, India is in a stage of demographic transition, as a consequence of which it can boast of the largest youth workforce in the world. But, the crux of the matter is, " Is our economy ready to harness so great a force?"

The term demographic dividend was first coined by David E.Bloon, and David Canning, Harvard economist, to describe the boost in economic growth that results from changes in the country's age structure. He emphasized the importance of demography to economic growth. To receive a demographic dividend, a country must go through a demographic transition where it switches from a largely agrarian economy with high fertility and mortality rates to an urban industrial society characterised by low fertility and low mortality rates. In the initial stages of transition, fertility rates fall, leading to a labour force that is temporarily growing faster than the population dependent on it. Thus per capita income grows more rapidly during this time. The economic benefit is the first dividend received by the country that has gone through a demographic transition.

India can take absolute advantage in terms of economic growth from its youth bulge and demographic dividend. The benefit of the same would largely depend on whether the youth in the working population can actually be trained and provided with the skills necessary for the changing needs of the industry as well as creation of jobs for people who will join the labour force each year. In the age of Industry 4.0,the ever increasing shift towards automation, digitalisation and analytics across multiple functions has made it necessary for youngsters to acquire newer skill sets. Today, jobs across the world require and demand familiarity and expertise in disruptive technologies like virtual reality, block chain, cyber security, artificial intelligence,IOT (internet of things) etc. These skills sets are posing a challenge for young Indians as higher education in our country hasn't evolved in step with the changes of Industry 3.0 and 4.0, nor has the mindset of the Indian job seeker. According to a recent report, India's unemployment numbers are at a record high and look depressing. The centre for monitoring Indian economy (CMIE),has estimated that in the year 2018,there are around 31 million people unemployed Indians seeking jobs at the present. The problem gets even more severe with an additional 15 million people entering the job market every year seeking new jobs,while a further 11 million jobs were lost in year 2018. As of December 2017 408 million people were employed which dropped to 397 million in December 2018. With such unemployment among youth,the auguries for the future of today's youngster are not very good. India's youth

bulge and demographic dividend has become a double edged sword. Many social scientists believe that if the youth bulge potential is harnessed, India can enjoy both economic growth and peace. However, squandering it, can incur diminishing growth and social strife – a double jeopardy. Reports of un-employability of Indian youth have put a question mark on the real value this dividend. In November 2016,a report by the Federation of Indian Chamber of Commerce and Industry (FICCI),on higher education stated that almost 93%of the Management Graduates (MBA)and 80% of engineering graduates are not employable. The reason for such a dismal situation is the result of the quality of higher education in India. According to All India Council for Technical Education (AICTE),nearly 200 substandard engineering colleges have applied for closure. According to AICTE, the total intake capacity at the undergraduate level was15,71,220, of which total enrolment was 7,87,127 which is approximately 50%. According to estimates there are 10325 Engineering colleges in the country of which less than 350 are worthy of any recognition thus causing AICTE to want to close down about 800 engineering colleges across the country. According to the Associated Chamber of Commerce & Industry of India (ASSOCHAM),barring a handful of top business schools like IIMs and a few other reputed Institutions, most of the 5500 B schools (not including unapproved institutes) in the country are producing sub-par graduates who are largely unemployable resulting in CTCs which average as low as Rs. 100000 p.a. Increasing population has led to the increasing demand for college education and to meet this demand, there has been mushrooming of colleges and universities in the country set up by Real estate tycoons, politicians and wealthy individuals rather than visionary educationists. As education in most cases has turned into business models, courses and curriculum are designed to accommodate the masses and quickly cash in on the lure of easy money. Unemployed youth with no skills for jobs of the future coupled with lack of employable opportunities would result in idle minds which isslowly but dangerously turning into the proverbial devils workshop, where politics, religion, crime and poverty may combine to result in a toxic brew. Saving this generation from the deadly pathologies of crime, war, drugs, alcohol etc., requires customising our education and vocational apprenticeship to the demands of the changing labour market.

Conclusion

Higher education in India with an innovative mindset is the key to leveraging the demographic dividend for the benefit of the society and community. There is an urgent need to create a quality revolution in higher education and build the 21st century model of higher education that is of high-quality, yet equitable and affordable. The fourth industrial revolution poses the biggest opportunity and yet the largest threat to a prosperous future. India cannot afford to squander this moment. It is imperative therefore, that the Education sector in India shows complete adaptability to the latest technology, readiness to explore and accept change using skill and phenomenon based learning so that the new equation to lifelong learning. 5c+2m+1r >3r,becomes a true reality. MA

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FROM INDUSTRY 4.0 TO AGRICULTURE 4.0:

SHAPING THE FUTURE OF FARMING TO STRENGTHEN BACKBONE OF INDIA!

"Form per drop, more crops, we now have to move towards an inch of land and bunch of crops"

–Honourable Prime Minister Mr. Narendra Modi.

Abstract

We are living in the era of fourth Industrial revolution and automated world and the lives of farmers are still in darkness. The agriculture sector contributes nearly 17 percent to the GDP of India and supports 58 percent rural households. India has second largest arable land with 160 million hectares following US. Unfortunately, the agriculture sector in India is still bleeding. The growth rate of agriculture sector is slow and it is less than 4 percent per annum. This growth rate will take next 25 years to double the income of farmers. Small farmers should be aware of agricultural revolution 4.0 and applicability of it in farming. Government should reorient some part of their subsidies towards smart farming and creating awareness programmes for farmers. Satellite technology and its applications are next welcome step for transforming agriculture sector and India. It is vital for small farmers to adopt the techniques of precision farming to step forward towards agriculture 4.0.

We are alive due to the collective efforts of farmers. Why farmers are living their lives in lurch? The survey made by Centre for Study of Developing Societies (CSDS) based in Delhi found that majority of farmers would like to switch over from farming due to poor income and bleak future. The survey of 5,000 farm households across 18 states made by CSDS revealed that 76 per cent farmers would like to quit farming. Sixty-one per cent of these farmers would prefer to be employed in cities. Key findings of survey made by CSDS showed that 70 percent of farmers were not known to direct cash transfers whereas 73 percent of farmers have not heard about land acquisition law and foreign direct investment. Majority of farmers complained of repeated losses in farming and 70 per cent of respondents said their crops were destroyed due to unseasonal rains, drought, floods and pest attack. We are leaving in the era of fourth Industrial revolution and automated world and the lives of farmers are still in darkness. Apart from grants and subsidies, the efforts should be taken to adopt technology driven methods of agriculture, robust supply chain and elimination of middlemen in supply chain for substantial benefits to the farmers. It will encourage them and will definitely improve their lives. The farmers can be engaged in small scale businesses during non farming season for their livelihood. Strengthening the backbone of farmers will strengthen India!

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Practicing Cost Accountant
Uttar Pradesh

This article tries to throw a beam of light on the agriculture revolution and strengthening supply chain management and elevating the techniques of precision farming in India to

lighten up the lives of farmers.

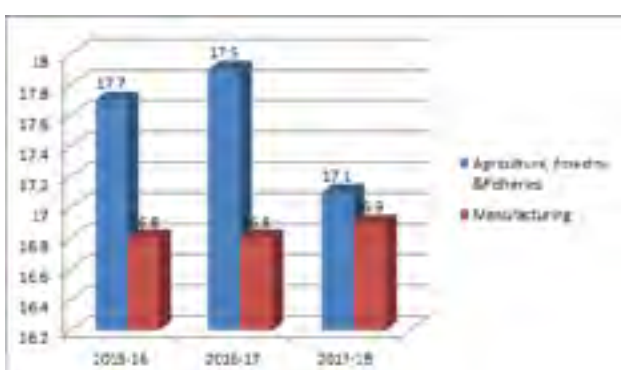
Agriculture Sector at a glance:

Agriculture sector supports 58 percent of population of India. The gross value added by agriculture, forestry and fishery sector amounted to Rs. 18.53 trillion (Source: IBEF) during FY18. The contribution of agriculture, forestry & fishing sector towards GDP of country seems to be more than manufacturing sector. The GDP contribution of different sectors during previous three years can be seen as follows:

Table 1: Sector wise contribution towards GDP of India:

Sector	2015-16	2016-17	2017-18
Agriculture, forestry & Fishing	17.7	17.9	17.1
Industry:			
Manufacturing	16.8	16.8	16.7
Others	13	1.1	0.4
Services	52.5	52.8	53.9

Source: Ministry of Statistics



List of the top 10 agricultural countries by GDP contribution 2017:

India has been ranked at second position on the globe for GDP contribution in agriculture sector. Top ten agricultural countries by GDP in world for the year 2017 are as follows:

Table 2: Top ten agricultural countries by GDP

Top ten agricultural countries by GDP	
Rank	**Country**
1	China
2	India
3	United States
4	Indonesia
5	Brazil
6	Nigeria
7	Turkey
8	Japan
9	Argentina
10	Thailand

Source: World Fact book GDP

Industry 4.0 or Fourth Industrial Revolution:

Industry 4.0 reciprocates to fourth industrial revolution where industrial production processes are inter-connected and automated. Industry 4.0 is also referred as IIoT (Industrial Internet of Things) and smart manufacturing. Industry 4.0 is the new phase of Industrial revolution. It focuses on automation, interconnectivity, real-time data, big data and machine learning. It provides a holistic approach and efficient ecosystem of manufacturing and supply chain management. During the Fourth Industrial Revolution, the industries must revolve around not only increasing output, but minimizing impact on the environment which is crucial for human evolution and survival.

Agriculture 4.0-Future of farming technology:

The population of world is expected to be 9.7 billion people by 2050. Farmers will need to produce more food to feed the world over the next 35 years as compared to previous 2,000 years. To feed the world in 2050 it will require 70 percent increase in food production. The agricultural 4.0 revolution can help to feed the rapidly growing population. It can be done with the help of Internet of Things and several techniques of precision farming.

Agricultural-food supply chain:

Agricultural food supply chain stands for the set of activities contributing to the supply chain of food starting from raw materials inputs till the delivery of products in the hands of consumer. As per the report of World Economic Forum (WEF), a quarter of all food, measured in terms of calorie is wasted from "farm to fork". Eight percent of this loss occurs in the upstream value chain. The loss in agricultural produce can be reduced with shorter supply chain. The elimination of middlemen in the supply chain will put handsome share in the hands of farmers.

International Logistic Performance Index (LPI), 2018:

Logistic Performance Index is an interactive benchmarking tool to help countries identifying the challenges and opportunities in terms of logistic. Logistic Performance Index is based on several parameters and it allows the comparison across 160 countries.

Table 3: Logistic performance Index, 2018

Logistic performance Index, 2018		
LPI Rank	**Country**	**LPI Score**
1	Germany	4.20
2	Sweden	4.05
3	Belgium	4.04
4	Austria	4.03
5	Japan	4.03
6	Netherlands	4.02
7	Singapore	4.00
8	Denmark	3.99
9	United Kingdom	3.99
10	Finland	3.97
44	India	3.18

Source: Report of World Bank on LPI

Several start ups companies and other corporate have joined hand to robust the supply chain and eliminate middlemen. They are working on B2B and B2C models. In B2B, they work with large agricultural-corporate like sugar mills. They reach out to farmers through an on-field team. In B2C model, they have field channel partners, who have created a network of booking agents and tractor owners, called 'Dost' and connect with farmers.

Precision agriculture: Methods of Agriculture 4.0 Revolution

Precision agriculture, satellite farming, or site specific crop management is a farming concept based on software and IT services. Precision farming accesses real time data about the conditions of crops, soil, air and other relevant information.

Precision agriculture involves the use of robotics, sensors, drones, farm management software, biological inputs, gene editing and cloning, biological data, artificial intelligence and machine learning and block chain. Precision agriculture could lead to efficient agricultural system and reduction in wastes and make farming economically and environmentally viable.

The precision farming market is expected to reach $10.23 billion US dollars by 2025 at a CAGR of 14.2%. Precision farming is gaining importance around the world. It integrates data and analytics with crop science to enable scientific farming decisions. Precision farming is based on the technologies like GPS, soil sensors, weather data and IoT for decisions related to fertilizer application, irrigation, harvesting time and seed spacing.

Sensors in fields are able to find the moisture content of the fields and measure the temperature of the soil and surrounding air. Satellites and robotic drones help the farmers to get real-time images of individual plants. Farmers can harness the information from those images and it can be integrated with sensor and other data to guide about the immediate and future decisions like water requirement of field and when or where to plant a particular crop.

Agricultural control center integrates the sensor data to determine the optimum amount of water, fertilizers and pesticides requirements. This helps the farmers avoid wasting resources and reducing costs.

Machina research Institute based in California showed that there will be 27 billion connected devices in 2024 out of which 225 million will be used in agriculture. Research made by IBM revealed that 90 percent of the crop losses are due to bad weather. This crop loss can be reduced to 25 percent with predictive weather modelling and precision agriculture techniques.

Studies made in 2015 revealed that US had been the largest market for precision farming with 54.3% share followed by Europe with the share of 25.25%. The precision farming has not gained substantial share in farming in Asia pacific region. Precision farming is still under early stage of adoption. Start ups companies are helpful for the farmers to turn the traditional farming to precise farming with data analytics, Internet of Things (IoT) and robotics.

There is no exact data on the number of farmers using precision agriculture methods. However, the start up company Trimble had claimed that it has sold over 10,000 laser levellers in Punjab, Haryana, Western Uttar Pradesh, Rajasthan, and Tamil Nadu.

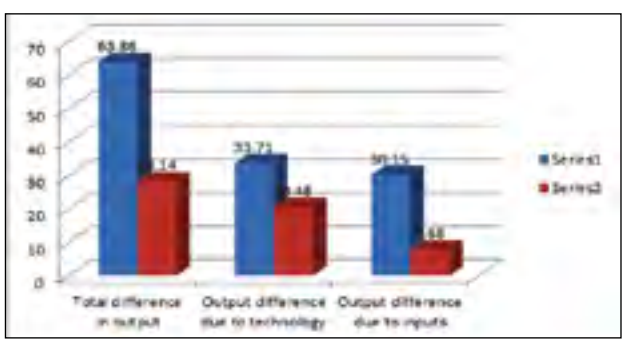
Trimble asserts that machine helps to improve the paddy yield by 8-10 percent by improving water coverage and decreasing the extent of weed infestation by 20-30 percent. 30 percent of water is saved annually due to the levelled land.

Using big data, satellite imaging and Internet of Things, Precision Agriculture can help address low productivity, lack of farm mechanisation, and access to markets, and increase crop yields with the help of big data, satellite imaging and Internet of Things.

Productivity difference in precision and non precision farming:

A study conducted on two farm produces in Dharmapuri district of Tamil Nadu, India had collected the following results from the application of precision and non precision farming in India:

Productivity difference in precision and non precision farming:



Source: Tech Mahindra white paper

Here, series 1 shows the study on farm produce tomato and series 2 for brinjal. The difference in productivity can be seen from the applicability of precision farming.

Technologies of precision farming:

Certain emerging technologies of precision farming are as follows:

Robotics:

Now-a-days, robots are performing lot of functions in agriculture starting from crop seeding to autonomous tractors calculating necessary doses for specified areas. Robotics is helpful to prevent crop loss, optimising efficiency, monitoring ecosystems and preventing pollution.

Global Navigation Satellite Systems (GNSS):

Global Navigation Satellite Systems (GNSS) covers all countries satellite constellations including GPS, GLONASS, and Galileo. Global Navigation Satellite System stands for constellation of satellites providing information, transmitting positioning and timing data to GNSS receivers. Some of the examples of GNSS are Europe's Galileo, USA NAVSTAR GPS, and Russia's GLONASS.

Irrigation

Innovations in precision irrigation technologies are gaining importance due to scarcity of water for irrigation. With the help of precision farming, the producers will be integrating soil moisture, monitoring weather data and variable-rate irrigation (VRI) into their systems.

Precision Mobile Drip Irrigation as another major advancement in precision farming. Under this system drip line is pulled through the field by a center pivot or linear move irrigation system. The drip lines deliver water directly to the soil surface. Evaporation and wind drift are eliminated and it allows more water to reach the root zone.

Internet of Things (IoT):

Internet of Things has connected home. For example, the appliances, security systems, and other systems are communicating with each other and with the homeowner.

The connected components in agriculture might include field sensors for logging real-time weather, soil moisture, and temperature data and satellite imagery for field monitoring. Such device communications could also be used in dispatching programs, sales interaction tools, and other business management applications.

Internet of Things (IoT) in agriculture around the world:

The world is seizing the opportunity by making investments in Internet of Things (IoT).

Australia:

Government of Australia has allocated AU$ 60 million to encourage smart farming. The fund will be allocated to farm businesses and these farm businesses will cooperate with new technologies society and it will provide solutions to farmers for improving soil status, crops and biodiversity.

Ireland:

IFA (Irish Farmers' Association) in collaboration with the Environmental Protection Agency has launched a program to reduce costs and improve soil productivity. The programme will help to save energy and water with the adoption of new technologies. With the help of Internet of Things (IoT), greenhouse gas emission was decreased by 10% and the soil fertility showed 47% of savings achieved.

France:

Ministry of Agriculture, Research and Economics is

a partner of the Agriculture Innovation 2025 project. Agriculture Innovation 2025 project targets to strengthen research on agricultural land, climate and developing precision agriculture. The project will create incubators to promote the research and development.

China:

China has launched a four-year plan in the year 2016 to integrate IoT (Internet of Things) into agriculture. Its Pilot projects were started in 8 provinces with the introduction of 426 applications, technologies and products.

United States:

The Department of Agriculture gave $7.3 million for a new generation of agriculture technologies. The investment is aimed at developing precision technologies to maximize efficiency in the industry.

Italy:

Italy has taken important step with the help of Internet of Things (IoT). Hyper-amortization was linked to the purchase of technology for agriculture 4.0.

Sensors:

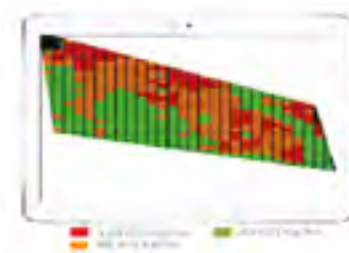
Sensors are widely used in precision farming to gather data on soil water availability, soil fertility, leaf temperature, leaf area index, plant water status, local climate data, insect-disease-weed infestation, and other information. On-the-go sensor information and On-board applicator options communicate real-time crop health conditions which help to tailor product applications. Weed detection sensor are used for precise site-specific application of herbicides.

Advanced monitoring system for the vineyard

Variable Rate Seeding:

Variable rate application (VRA) seeding is one of the methods of precision farming. VRA technology focuses on the automated application of materials to a given agricultural land. These materials can be fertilizers, chemicals, and seeds, and they all help optimize one's crop production. The materials are applied on basis of data collected by sensors, maps, and GPS.

The following image shows the applicability of variable rate seeding technique on land.



Weather Modelling:

Weather plays significant role for crops and livestock. Temperature, sunlight and rainfall have major effects on their crops. Weather forecasting is the application of current technology and science to predict the state of the atmosphere.

The National Weather Service of United States launches hundreds of weather balloons twice daily to record temperature and other data used in weather forecasting. Agriculture satellites are used around the world to help assess crop health, yield, and facilitate environmental analysis to ensure farmers necessary details to farmers. Drones are helpful to uncover meteorological secrets critical for improving weather forecasts. Drone proves to be extremely important in places prone to sudden and violent storms.

Nitrogen Modelling

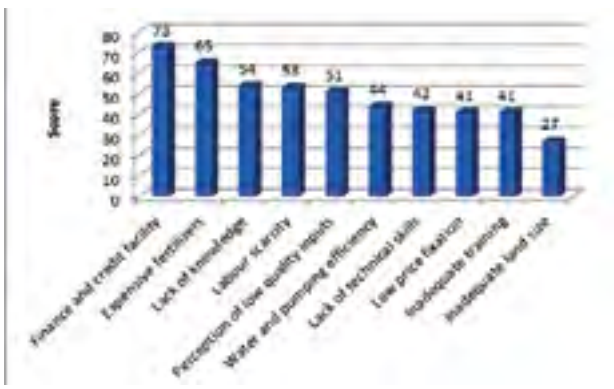
Nitrogen is needed for healthy crop production. Nitrogen is added to the soil through fertilizer application or by microbes in the soil breaking down organic compounds. However, when there is more nitrogen in the soil than the plants need, it leaches out into the water and can accumulate in lakes, rivers and oceans.

SCAN is a tool for nitrogen management in precision farming. SCAN can be the best option for farmers desiring to maximise profits related to nitrogen fertilizer. There are two major innovations under SCAN. The first involves extracting agronomic knowledge related to nitrogen fertilization and requirement of nitrogen by the crop. The second innovation involves modelling this agronomic knowledge.

Constraints in adoption of precision farming:

There are certain key challenges before the implementation of precision farming in Indian agriculture. Research made by Tech Mahindra had given different scores to different reasons for adoption of precision farming in India.

Graph showing constraints for adoption of precision farming and their score:



Source: Tech Mahindra white paper

Conclusion

The agriculture sector contributes nearly 17 percent to the GDP of India and supports 58 percent rural households. India has second largest arable land with 160 million hectares following US. Unfortunately, the agriculture sector is still bleeding. In the era fourth revolution, approximately 70 percent of agricultural households have less than one hectare of land holding and they depend on loans for their farming activities and struggling for bread and butter. Irrigation facility is available for only 45 percent of net sown area. Precision technology can prove to be boon for Indian agriculture. Earlier, precision farming was limited to larger operations. Now, mobile apps, smart sensors, cloud computing and drones have made it possible to apply precision farming for cooperatives and small farmers. But the small farmers should be aware of agricultural revolution 4.0 and applicability of it in farming. Government should reorient some part of their subsidies towards smart farming and creating awareness programmes for farmers. The growth rate of agriculture sector is slow and it is less than 4 percent per annum. This growth rate will take next 25 years to double the income of farmers. However, government had taken several initiatives during previous years to strengthen the backbone of farmers. Several welcome steps have been taken by the Government like creation of market linkages (eNAM), ensuring availability of quality seeds, implementing soil health cards and raising minimum support price (MSP) for agricultural products. Implementation of these measures will not be sufficient. It is required to drag the bull by horns and change the way of farming. Agriculture revolution 4.0 can change the lives of farmers who are feeding the entire economy. Mobile and internet has brought dramatic change in the society. Satellite technology and its applications are next welcome step for transforming agriculture sector and India. It is vital for small farmers to adopt the techniques of precision farming to step forward towards agriculture 4.0. Industry 4.0 can be shifted towards agriculture 4.0 to uplift the lives of farmers and strengthening the economy of India. MA

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Authors and other contributors of the journal are requested to kindly send their original unedited photos/images in JPEG format only having high resolution (200-300 dpi). This is needed to maintain the required quality of the journal.

INDUSTRY4.0:
IS INDIAN CORPORATES ARE READY FOR INDUSTRIAL INTERNET OF THINGS (IIoT)?

"Data is King"- Anonymous

Abstract

The journey from the usage of professional machinery in the production of goods to a new age of internet based advanced application like Internet of Things (IoT), Artificial Intelligence (AI), Cyber-physical systems (CPS), Big Data Analytics and Cloud Computing etc. change entire spectrum of doing business now a days which we termed as Industry 4.0. It restructures the entire process of value creation. It is very hard to ignore it, as it will necessarily upgrade the value chain of any given industry as it tries to eliminate the intricacies in between processes, thereby slicing the costs.

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Let us all start believing that the time has come for another revolution, a revolution that promises to bring one of the finest possible yields and cause a paradigm shift in the modus operandi of industries and businesses. It combines the strengths of optimised industrial manufacturing with cutting-edge internet technologies. The cognoscenti entitles it to be 'the fourth revolution' or just as crisp as 'Industry 4.0'. Some advanced countries have embraced this and already started reaping the benefits, however, there are countries where this idea is in the nascent stage or is completely unheard of or impossible for application. Germany, USA, France and others are the fistful countries which have been an active participant in this shift. India is lagging behind with some other countries. The last category of countries where it currently seems impossible to apply is the heavily crushed economies like Syria, Venezuela and others, where industries have taken a backseat.

Evolution of Industrial Revolution

The first industrial revolution embarked the usage of professional machinery in the production of goods dropping off the primitive methods of production. It promoted the growth of capital goods industries like coal, petroleum, rail, etc. The second revolution involved the electrification of the machines used in the production. This era principally promoted the idea of industrialisation and mass production. The third revolution in the industry observed the application of micro-electronics and smart automation in the work processes (Rojko, 2017). This ensured maximum accuracy and precision at work. If we are to analyse the revolutions over time then we would say that now the fourth revolution somewhat feels similar to what mechanisation felt two hundred years back, electrification in the nineteenth century and what automation felt back in the

20th century. All these ideas which germinated from the human brain, ensured opportunities to grow and bring ease in handling work.

The fourth revolution basically concerns the integration of various physical devices over internet connectivity. The idea conceptualised in Germany and later the concept was first presented at the Hannover fair in 2011. In brief, it is fundamentally entwined with the concept of Internet of Things (IoT), Artificial Intelligence (AI), Cyber-physical systems (CPS), Big Data Analytics and Cloud Computing. The ability to handle physical devices by the help of internet connectivity is actually the basic idea of IoT and if this concept of IoT is applicable in an industrial set-up, it becomes the Industrial Internet of Things (IIoT). This integrative process involves the analysis of voluminous real-time data generated from machines, charts a pattern between such data and facilitates them (devices) to take 'decentralized' and 'autonomous' decisions. As it happens that we cannot keep AI away from IoT because huge chunks of real time data needs to be analysed by tools of AI (predictive analytics, prescriptive analytics, machine learning, etc).

Strategic understanding of Industry 4.0

Industry 4.0 hopes to restructure the process of value creation. It is very hard to ignore as it will necessarily upgrade the value chain of any given industry as it tries to eliminate the intricacies in between processes, thereby slicing the costs. In an age where competition plays a pivotal role in determining the health of an organisation, it becomes inherent for them to revamp their value chain- remodel the way they perform their primary and support activities, the incremental value created in between the processes. To enable the seamless performance of IIoT, there must be smart factories which produce smart products.

Hence, fourth revolution is tried to explore the potentials of new technologies and concepts such as:

- Availability and use of the internet and IoT,
- Integration of technical processes and business processes in the companies,
- Digital mapping and virtualisation of the real world,
- 'Smart' factory including 'smart' means of industrial production and 'smart' products (see. Fig: 1)

It also elucidates on Machine-To-Machine (M2M), manufacturing systems which will interconnect with each other over the Industrial Internet of Things. There are many facets of production which is unstructured and needs human intervention. The lack of an ability to totally automate led to the invention of collaborative robotics or a point of intersection between humans and robots, who work together and robots, in the process, follow the pattern followed by humans to perform the work. This is also called Human-To-Machine (H2M) collaboration (Rojko, 2017).

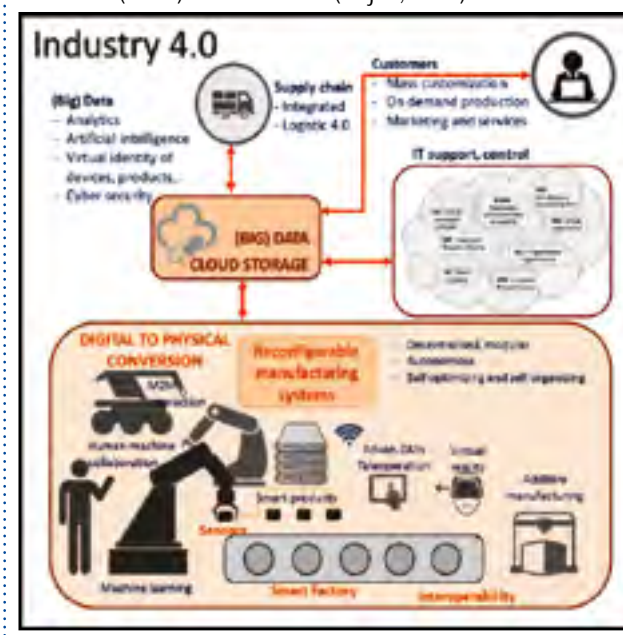

Fig 1. *Source: Rojko, A. (2017)*

Challenges faced by the Indian Industries in implementing Industry 4.0

Many top notch organisations in India already using albeit ERP (Enterprise Resource Planning) modules and MES (Manufacturing Execution Systems) models, however, the concept of IIoT has not yet trickled down to the various layers of the industry. The predominant reason behind this, the economy is still trying to improve its primary infrastructure, remove poverty, fight the agrarian distress and tackle other pressing problems. The majority of the population cannot handle the prevailing technological literature as a result of which any shift in technology becomes a challenge to incorporate rather than an apparent opportunity though India has welcomed the idea of Industry 4.0, as a smart factory is being set up in the Silicon Valley of India. So, a lack of preparedness is the main cause behind the poor application of Industry 4.0 operators in India. Some top companies like Tech Mahindra, OMRON, SIEMENS, IBM and others provide Industry 4.0 solutions to other companies. As mentioned earlier, the smart factory in Bengaluru is being developed in the Indian Institute of Science (IISc), Bengaluru-Centre for Product Design and Manufacturing (CPDM) with funding from The Boeing Company. Another Indian company like Tech Mahindra is creating value by modifying

its production and supply chain with the help of Industry 4.0 solutions as they felt it was necessary to digitalise their value chain and there was a lot of ambiguity in tracking processes. Another tech company like IBM provided Industry 4.0 solutions to Maruti Suzuki Ltd. to remodel its value chain and this helped the automobile company to slash down its planning time and set up time by 35%. In short, productivity takes a front seat with the advent of Industry 4.0 solutions. To support the 'Make in India' initiative, it has become a matter of significance to embrace this change with open arms.

Lack of skilled manpower- As this fourth revolution seeps in; it requires a different type of manpower to handle the technological literature which is different from the conventional methods, but industries in India face a skilled labour crunch. Decision makers must do a gap analysis- what is the existing criteria of labour requirement and what will be the same in the future.

Lack of awareness- Apart from a few top notch companies, there are other medium and small scale enterprises that are not yet aware or willing to adopt the technological shift. Some firms are of the idea that any form of investment in technology is risky as a result of which they are not motivated to invest (Suresh N. et al., 2018). Though the government has taken initiatives to promote innovation in the art of making profits, but often it has faced resistance from a good number of industries. Lack of eagerness in these firms to accept change can be a factor under this head.

Lack of scale- The Indian automotive industry lacks the volume or scale of production. Industry 4.0 will be inherently advantageous to the industries which participate in large scale production rather than the firms which compete for a smaller market share (Rojko, 2017).

Lack of design/infrastructure-The elements of Industry 4.0 demand a considerable amount of structural investment to function smoothly. Most of the firms lack the appropriate design to support I 4.0 tools. The factories must have the structure to ensure seamless transportation of data in between machines, processing them and churning the best results from the process.

Lack of pervasiveness- The Indian industrial scenario comprises mostly of MSMEs. As the idea of Industry 4.0 is still germinating in India, it will take a considerable amount of time to reach them because the cost of investment is high and these enterprises are skeptic most of the times to accept something new. The success of Industry 4.0 lies in its pervasiveness, in the context of India. The more it penetrates down the corporate pyramid (MSME's), the more Indian industries become proactive to change.

Conclusion:

In an age where competition plays a pivotal role in determining the health of an organisation, it becomes inherent to seize the skepticism regarding the fourth phase of industrialisation as an investment now will help the firm to create value throughout the value chain in the long run. The idea of the fourth revolution ensures productivity in the various layers of management by undergoing a structural shift in data- processing. A more integrative approach in the industrial arena trying to unite all the levels of an organisation ensures transparency, path breaking connectivity and dynamic scalability. We can see that corporations will use these (elements of Industry 4.0) as a tool to tackle the prevailing cut throat competition. There's a lot of effort required on the part of India so that she becomes an active participant in this fourth era of industrial renaissance, rather than just a mere audience. According to a Deloitte report, India is very optimistic about its Industry 4.0 ventures as firms are enthusiastically looking forward to this change. Mr. Ravi Damodaran says, *"Therefore, the necessary ingredients for adoption of Industry 4.0, such as investment appetite, an innovative ecosystem & collaborative environment has to be created first before creating the skill sets required to implement it."* MA

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DECIPHERING DESIGN THINKING AS AN APPOSITE APPROACH FOR BFSI 4.0

"There is no luck. Luck is the residue of design"

– Branch Rickey (1915)

Abstract

Design Thinking, the buzzword in the global business landscape, since last decade, is generally referred in the context of bringing out innovations in products and services. Such innovation, essentially will be an evolution out of a rational, outcome based and strategically thought-through process of a full-fledged research. What was initially adopted by tech-enabled businesses, in deciphering client requirement and converting the same into problem solving solutions, gradually started finding ways into other sectors too. Different management consulting firms started using design thinking ideas in helping firms to innovate, not just products, but also finding solutions for day-to-day operational challenges, including cost control challenges. Banking and financial services sector, with the rage of FinTech and Digital Finance, scraping through the industry dynamics, has now adopting design thinking to innovate processes to enhance value for customers. In this article we have attempted to initiate a deliberation of how and why of design thinking is being adopted by banking and financial services industry, especially in the era of challenging, complex phase of digital disruption that the traditional financial sector firms are baring their chests against.

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Design Thinking is an approach to innovative solution finding for business problems. Largely publicised by Stanford School of Design since early 2000s, design thinking has been adopted by companies from across sectors. Basically, design thinking suggests an adoption of human-centred methodical view of innovation process, where the innovating team is called in from diverse functional areas and the process of creative solution finding through their immersion into the problem starts with defining the problem from simulating an end-user situation and in his point of view. It is thus expected that newer ways of defining problems will emerge followed by newer dimensions of the solutions. In this article we have attempted to initiate a deliberation of how and why of design thinking is being adopted by banking and financial services industry, especially in the era of challenging, complex phase of digital disruption that the traditional financial sector firms are baring their chests against

BFSI 4.0 – The Real Challenges

There is a sudden surge of FinTechstartups and unheard ideas on the floor. There are questions on traditional ways of servicing a customer of financial product. Banks, especially, are at the loggerheads of accepting that the next best thing that's going to change the fate of their existence is 'digital disruption'. Financial service providers, in summary, are constantly experimenting with every new idea proposed by tech engineers, unknowing,

which innovation might end up destroying their traditional approaches, and a new competitor emerge, to make their existence meaningless. ATMs, online banking, self-care kiosks, UPI, online investing, gamified investing, app-based portfolio trackers, chatbots, robo-traders, robo-advisers, virtual relationship mangers, are just few examples of customer-facing advancements successfully adopted by BFSI sector. These have now become just the essentials a bank or financial service provider need to have by default, and these are not necessarily are value-propositions. In addition, banking and financial service sector around the world, face the below challenges, currently:

- There is a wave of digital disruption, leading in increased demand for data and the outputs thereof and technology is playing a pivotal part in this disruption process. Emergence of new age analytical abilities, data science adoptions, artificial intelligence and machine learning capabilities are posing newer challenges to the sector
- The boundaries within which the financial institutions need to operate, set by the regulators at different levels, increase the dimensions for accountability. This also has brought down the opportunity set and increase of cost of doing business
- Customer behaviour, demographics and preferences are changing at rocket speed. The definition of delightful service experience from financial service provider is changing, with the digitally savvy customer.
- Constant macro-economic changes, volatile and uncertain financial market behaviour is another environmental challenge financial service provider needs to operate within
- Increased rivalry among competitors, new entrants in the form of FinTechstartups and self-servicing behaviour of financial literate customers are the new threats to the revenue models of financial service providers.
- The cost challenges have not just posed increased burden on bottom lines, but also the newer complexities, newer problems, solutions for which are to be explored now.

Given this context, what is the business model, a bank or a financial service provider need to adopt next, such that, it doesn't get faded away in the competition from those early adopters of potential new innovation that may be a game changer? Can this trial and error process of testing every new innovation, go on forever, just to be sure that, in case there is a turnaround, they are still breathing? What are the costs and how do they compare with the benefits of such adopt-all new technology model? Design Thinking presents itself an answer to these questions, although, from a completely different perspective.

What is the concept of Design Thinking?

While innovation is the key approach to solve the above-discussed challenges, the method in which a solution is innovated, also matters. Most innovations, focus on the resources available to develop a solution. The beginning point, traditionally, is a supplier-driven view. Traditionally, innovations involved a subjective judgments of what might be the problem, for which the solution is being innovated. And most importantly, research for innovations were traditionally driven by field and subject matter experts. Design Thinking breaks this process. Design thinking approach requires end-user perspective to start with. What is the customer actually saying, what is his need, what are his behavioural patterns that are suggesting he has a problem to be addressed? A simple view from this perspective and an attempt to solve the issue, brings out a new innovation idea. This makes the solutions, be more data-driven. There is this reliance on data, gut-feel and forecast of how customer behaviour might change in times to come (based on what he says and what he does), and that makes the investment in such innovation makes it worth. Further, Design Thinking is about a brainstorming exercise, on a continuous basis, by a team that is well-diversified, in terms of the functional areas they all come from, in a stimulating atmosphere. Customer-perspective, creative brainstorming, structuring the discussions and processes and diverse set of brains behind, brings about a better solution, than what can come out by one specialist or a team of like-minded people.

In other words, Design Thinking is a method solution-based approach to solving simple to complex problems, irrespective of the nature of the business. The approach essentially, advocates, a process of understanding human needs involved, re-defining the problem on hand in human-centric ways, brainstorming for maximum possible ideas, prototyping the solution and testing for continuous improvement. There are multiple models to define Design Thinking, one of which is presented here below.

Five Stages of Design Thinking Model by d.School

(1) Empathise: One has to immerse into the physical environment to understand the experiences the end-user goes through, difficulties faced and the user-level perceptions that can be formed. For example, to understand the issues faced by the customer of a self-care banking kiosk put-up by a bank, the design thinking team, might have to spend time near the kiosk, including

being customers themselves and use the services. It may also involve a creating a simulated environment too. IBM has successfully come out with a solution for a wealth management firm using design thinking approach. For this, IBM set up conference rooms to simulate the experience of visiting a financial advisor's office, complete with assistants' office and waiting room with flat screen TV. This enabled the consultants of IBM to observe how actual advisors and customers interacted with technology and with each other.

(2) Define: A stage that requires structuring the observations in the form of specific problem statements that needs to be addressed. And point to note here is the problem needs to be deifned in the most human-centered way possible. For exmaple, a bank, instead of defining their problem statement as – "we need to increase the online banking usage for fund transfers of all our customers by 20%", should define the problem as –"customers should feel that it is most convenient to use our online banking portals for fund transfer". Is this problem statement human-centred? Yes, as it is talking about customer and his need. Is this problem statement broad-enough for creative freedom? Yes, this leads the team to explore all possible scenarios that may exist, where customer might find it inconvenient to use online portals for fund transfer. It broadens the solution range, at the same time, narrows the focus area for the team, which brings up the next question. Is this problem statement narrow-enough to make it manageable? Yes, the target is crystal clear. The spectrum of issues the customer is facing can be enumerated and provides a platform for brainstorming in a most specific direction.

(3) Ideate: Once the end-user and his needs are

understood, problem is defined in the human-centred way, the team would start thinkingoutside the box. New solutions can be discussed, in addition to viewing the problem from different angles. For example, the above problem definition regarding the customer feeling it convenient to use online banking for fund transfer, can be viewed from the multiple points of views:

- Customer should feel our online portal is easy-to-use for banking transactions
- Customer should feel that it is cost-saving to use online service
- Customer should feel it safer to do an online transaction
- Customer should feel there is a human assisting him with the transaction, who can empathise with unique/ non-standard needs he may have while doing the transaction

This process of ideation can generate alternative solutions like, bringing down the number of clicks for the fund transfer, re-emphasise of a very low cost of doing an instant transfer, insertion of multiple check-points, like OTP, dual passwords and instant email and SMS confirmations of transactions, and may be an interactive virtual assistant, or even a direct connect to a tele-banker, in case of unique requirements. Such ideating process can take the form of brainstorming (participants draw associations between their ideas in a free-thinking environment), brainwriting (one person writes down all his ideas and passes on to the next person, who uses them as triggers and writes further), Worst Possible Idea (participants will be rewarded if they give the worst possible solution – this enables elimination of patterns of thinking, that are not leading to best solutions, as well as, brings up more confidence in those members who have inhibitions to project their ideas or Scamper (A tool to brainstorm, where questions are posed to the team, using the seven mnemonics –S,C,A,M,P,E and R, each referring to words – Substitute, Combine, Adapt, Modify, Put to another use, Eliminate and Reverse, respectively)

(4) Prototype & Testing: This involves actual production or development of the shortlisted set of ideas. In our online transfer case, a test webpage can be developed and tested by the team members themselves, or by other employees who are not part of this team. Each solution is tested for either acceptance, modification or deletion. Also noted are the possible constraints unthought-of during the ideation phase.

It must be noted that, above five stages are not meant to be linear. There will be jumping, revisiting, feeding back, overlooking and constantly connecting flow between the stages, For instance, at the final stage of testing, the team might encounter a newer version of the problem, and may just find it worthwhile to start all over from the Empathising phase.

In Summary...

Design thinking, contrary how it had been perceived

to be a creative person's tool applicable in technology development process alone, is making in-roads into banking and financial services industry. FinTech products and services are just the result of such Design Thinking approaches. Historically, financial institutions have been developing products such that they would aid them in making their complex operations and internal processes efficient. And such products were then pushed through using creative marketing initiatives. Design Thinking, in theory and application, solve the problem.

It is rightly said by the senior partner of a leading financial services industry consultant firm, Oliver Wyman - "The banking sector is going through a period of disruption, but this is not the end of the industry. Instead, this disruption marks the genesis of the banking sector's new DNA: a combination of changes in business models, agile execution, and design thinking. Having said that, placing too much optimism on Design Thinking can turn out to be risky, in terms of customers defining and demanding the kind of products and services they would like to be serviced, sandwiching financial institutions between the cost challenges, competition and regulatory apnoea. MA

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INDUSTRY 4.0 - A NEW MANUFACTURING PARADIGM

"The Fourth Industrial Revolution is still in its nascent state. But with the swift pace of change and disruption to business and society, the time to join in is now."

– Gary Coleman

Abstract

Technological revolution plays very important role in the progress of human civilisation. Technological advancement fuels industrial revolution and in turn industrial revolution promotes further development in technology. First industrial revolution witnessed shifting of production from human labour to mechanical manufacturing. The second industrial revolution built on electric power to create mass production and third used electronics and information technology to automate it. We are now at the dawn of a Fourth Industrial Revolution in which breakthroughs technologies, such as artificial intelligence, robotics, 3D printing, IoT etc are redefining the physical and virtual boundaries through inter connected cyber-physical systems (CPS). The era of CPS leads to smart production with intelligent products, machines, networks and systems communicating interdependently and coordinating the entire manufacturing process with minimal human intervention. Current production systems, mediated by global value chains are becoming more dynamic, flexible, efficient and sustainable with high possibilities for customization and personalization. This Industry 4.0 will ultimately transcend into other segments to create smart cities, smart grids and other smart processes to enrich the human lives.

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In Greek mythology, Prometheus is credited for providing impetus to the growth of human civilisation by stealing fire from gods and giving it to humanity. Since then humans have touched great heights through striking innovations all throughout their evolution. The earlier civilisation flourished around water resources due to agrarian based economy. The first Industrial Revolution during late 18th century was one of the significant milestones in the progress of civilisation as it paved the way for migration of population to the cities and over the years the factories became the epicentre of human civilisation. During the course of technical evolution industry has benefited from new inventions and innovations which led to qualitative advancements in production processes resulting in achieving high quality precision at affordable cost. Now, we are witnessing the 4th Industrial Revolution which intends to truly automate the whole production process with inter-connected intelligent machines to bring about a new manufacturing paradigm.

History of Industrial Revolution:

Industrial Revolution is the process of shifting from an agrarian and handicraft based economy to machine manufacturing based economy. World economy has witnessed the first Industrial Revolution in Britain during the late 18thcentury; thereafter it spread to other parts of the world. English economic historian Arnold Toynbee popularize the term Industrial Revolution by using it to describe Britain's economic development from 1760 to 1840.

a)The first industrial revolution:

Abundance of fossil fuels and invention of Steam Engine by James Watt fuelled the first industrial revolution. It led to transition from handlooms to power-looms, production shifted to machines and water/ wind based energy sources were replaced by coal-based steam power. Industries like textile, chemical and metallurgy affecting distribution of income as well as affordability of product resulting in improvement in standard of living of the general population.

b) The second industrial revolution:

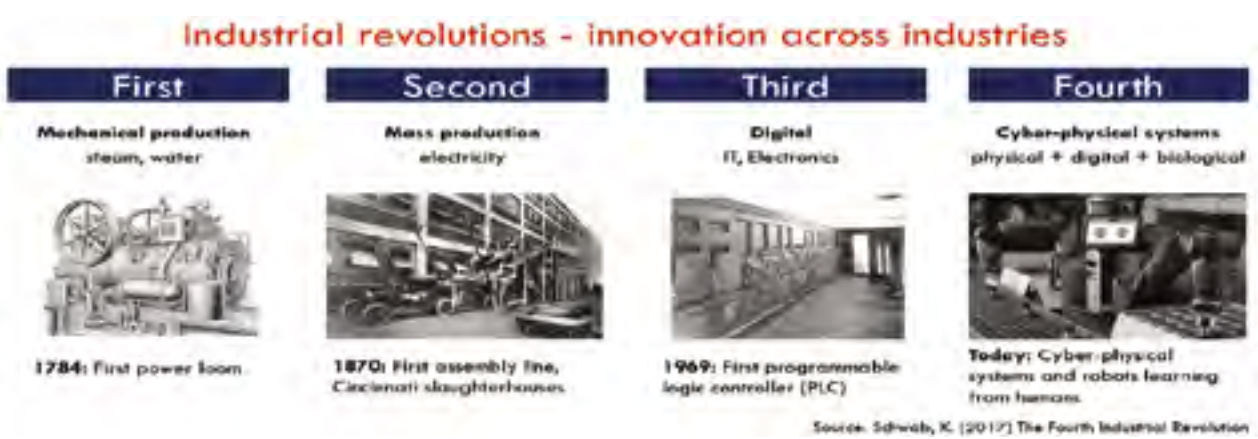
The period from 1870-1914 is regarded as the span of Second Industrial Revolution, which witnessed the expansion of electricity. With the improvement in steel-making process, large-scale manufacturing of machine tools and advanced machinery was become possible. It led to enormous expansion of rail and telegraph network, which allowed unprecedented movement of people and ideas, resulting in further acceleration of transition from agrarian economy to the industrial economy. This revolution is also identified with the era of moving assembly line and mass production.

c) The third industrial revolution:

It begins at around 1970s with introduction of microelectronics and automation and was characterized by the digitalization. Computer Integrated Manufacture (CIM) led to introduction of flexible production lines with programmable machines. The digital electronics, computers and the internet replaced the mechanical and analogue electronic technology leading to emergence of a new class of knowledge workers.

d) Entering a cyber-physical world:

Fourth industrial revolution was triggered by the advancement of Information and Communications Technologies (ICT). The technological basis of smart automation is creation of cyber-physical systems with decentralized control and advanced connectivity. In the fourth industrial revolution, multiple state of art emerging technologies are interacting with each other resulting in blurring of boundaries between physical, digital and biological worlds.



(Image credit: https://sydney.edu.au)

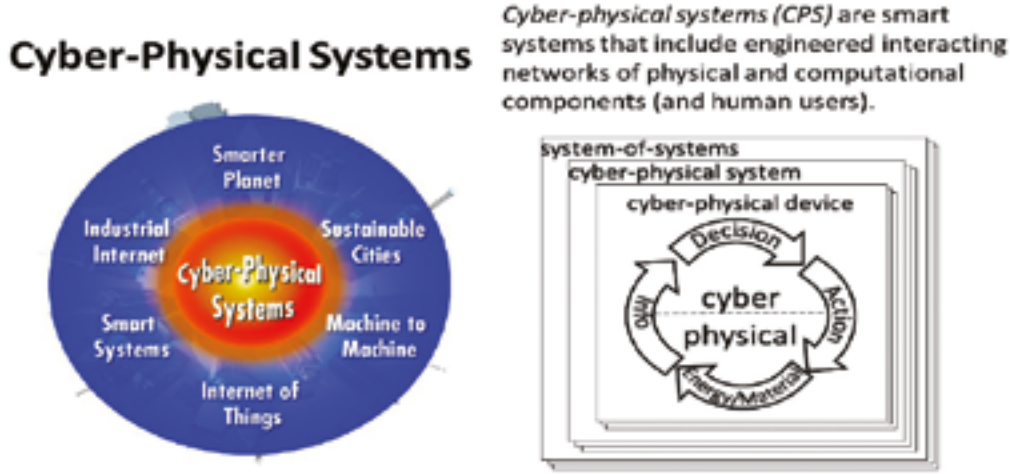
Industry 4.0 - Introduction:

The term "Industrie 4.0" originates from a project in the high-tech strategy of the German government, which promotes the computerization of manufacturing. The German government established "Plattform Industrie 4.0" to support German SMEs by helping them understand and exploit Industry 4.0 strategies and opportunities, particularly in the areas of standardization and norms, security, legal frameworks, research, and workforce transformation (Stankovic et. al. 2017).

Industry 4.0 brings much more to the table than the conventional Computer Assisted Manufacturing, introduced during the third industrial revolution. Outcome of Industry 4.0 is to propagate the concept of Cyber-Physical Systems (CPS) based smart factories, which will be powered by futuristic technologies like artificial intelligence (AI), robotics, analytics, big data and industrial internet of things, resulting in highly digitized and connected production facility, relying on autonomous smart manufacturing with the ability to self-correct.

Cyber-Physical System (CPS) –

On the of crucial elements of the Industry 4.0 is Cyber-Physical Systems, through which networks are created for the self-regulation of spatially distributed production resources. Under CPS all manufacturing systems are integrated, intertwined physically and through computational algorithm. New smart CPS envisages blurring the boundaries of virtual and physical worlds through a networked world where intelligent objects communicate and interact. CPS facilitates the emergence of revolutionary new applications, market model by creating new service providers, and value chains to transform almost all industrial sectors, such as automotive industry, energy, economy or healthcare. In association with the emerging technologies like, Artificial Intelligence (AI), Blockchain, Big Data Analytics, Internet of Things (IoT) etc, CPS will embed smart network system in almost every process to enhance the human security, efficiency, comfort and health.



(Image credit: https://slideplayer.com)

Technological Pillars of Industry 4.0 –

Many of the nice advance in technology that form the foundation for Industry 4.0 are already used in manufacturing, but with Industry 4.0, they will transform production: isolated, optimized cells will come together as a fully integrated, automated, and optimized production flow, leading to greater efficiencies and changing traditional production relationships among suppliers, producers and customers – as well as between human and machine. (Rubmann et. al. 2015)

a) Big Data Analytics:

Big Data is voluminous data, originated from countless different sources, such as business transaction systems, customer databases, medical records, internet click stream logs, mobile applications, social networks, the collected results of scientific experiments, machine-generated data and real-time data sensors used in industrial Internet of Things (IoT) environment. Data Analytics tools along with Artificial Intelligence (AI) applications like Machine Learning and Deep Learning can be embedded into smart factories for absolute automation.

b) Autonomous Robots:

Robots can perform tedious jobs consistently and tirelessly. Autonomous technology allows for machinery and robots, to act and behave autonomously after being programmed to do so. This technology allows for systems to think, act and react autonomously which also allows for decisions to be made remotely if control systems allow you to determine these behaviours from afar.

c) Simulation:

Simulation helps in imitating a situation, process or environment. Manufacturers could utilise simulation based virtual realities for training of employees and resembling the real-life accidental scenarios without having to be in the actual dangerous physical environment.

d) Vertical and Horizontal Integration:

Interaction between implemented systems based on highly specialized software and specialized user interface, which are integrated in digital networks create an entire new world of the systems functionality for the horizontal and vertical integration (Chukalov 2017). While horizontal integration is integration of information technology systems in the production and automated equipment for various stages of the production and planning process, vertical integration is at various hierarchy levels in production and automation equipment.

e) Industrial Internet of Things:

Under industrial IoT, interconnected autonomous machines are fitted with sensors for collection of real-time data for analysis and quick responses resulting in optimisation of production processes.

f) Cyber Security:

Industry 4.0 relies on interconnectivity of all devices and one of the derivatives of interconnectivity is increased cyber threat. Thus, protecting information systems and manufacturing lines from cybercrime threats is becoming a critical issue.

g) Cloud Computing:

Storing of data in a central server is the pre-requisite of interconnectivity and sharing of information among all devices. Cloud computing allows seamless flow of information from one connected device to another resulting in data sharing across sites and companies in order to achieve response times of mere milliseconds.

h) Additive Manufacturing:

Digital 3D design and 3D printing for prototyping and unit production helps in creation of decentralized systems resulting not only in production of customised products but also in reduction of transportation and inventory management costs.

i) Augmented Reality:

It helps in creation of visual imagery in the real-world. Manufacturers showcase their products to the customers without even going for the actual production. This technology can be able to demonstrate physical feel of the product without the expense of actual physical trial.

(Image credit: https://slideplayer.com)

Industry 4.0 and future Manufacturing Vision:

The future of production as predicted by Industry 4.0 consists in pervasive integration, where every manufacturing element autonomously exchange information, trigger actions and control themselves independently. This manufacturing approach that intends to create smarter processes is characterized by small decentralized and digitalized production networks that act without human intervention and autonomously control their operations depending on their environment changes and requirements (Pereira et.al. 2017). Industry 4.0 is a new manufacturing paradigm that is highly focused on the creation of smart products and processes, through the use of smart machines and the transformation of conventional manufacturing systems into smart factories.

a) Smart Factory:

The vision of smart factory envisages highly digitized and connected production facility that relies on smart manufacturing. Today factories are already been automated, but smart factories take this concept much further and are

designed to run without or minimal human intervention. The concept of Smart Factory can be summarised in the words of Warren G. Bennis, "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" (www.brainyquote.com).

b) Smart Product:

are integrated with the value chain as an active part of the systems. These are characterized by features like computation, data storage, communication and interaction with their environment, being able to identify themselves, storing data about their production process and providing information about further steps regarding production and maintenance. A smart product combines the physical and software interfaces. Even though Smart Products are interactive, they are dedicated to certain functionality – i.e. they are not up-gradable.

c) Other aspects

of future manufacturing vision are supply chains and customers. Industry 4.0 as a new manufacturing paradigm optimizes value creation processes and integrates through the supply chain by way of smart communication between supply chains. Customers are a key factor in every business model and Industry 4.0 brings a set of advantages for the, improving communication along the value chain and enhancing the customer's experience.

The Concept of Mass Customisation:

With the rise of digital fabrication methods, such as 3D printing, laser cutting, CNC-milling and robotic assembly, the ability to manufacture products economically in small batches, even in batch of one becomes a real possibility. Mass customization could allow products to be accurately designed to the specific needs of each individual consumer and make him part of the design process. This will help to create unique products among the homogenous mass produced standardized products resulting in creation of stronger emotional bond between consumer and product.

The advantages of mass customization includes, (a) better product positioning and higher market share (b) less material wastage and lower inventory (c) quickly adapting to customer requirements and (d) Offering wide range of products with low production costs.

Conclusion: All revolutions tend to disrupt the market scenario and Industry 4.0 is no exception. Industry 4.0 will lead to merging of technologies and escalate the competition to geo-economic level. In the words of Klaus Schwab, "We must develop a comprehensive and globally shared view of how technology is affecting our lives and reshaping our economic, social, cultural, and human environments". There has never been a time of greater promise, or greater peril." Outdated technologies based production will be wiped out and millions of job will be lost. However, new categories of job will be created and future Smart Factories will produce smart and customised products to enrich human lives with higher standard of living. MA

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INDUSTRY 4.0:
LEVERAGING FOR EFFICIENCY, ADAPTABILITY, PRODUCTIVITY

Abstract

Industry 4.0 is a gradual shift from Manual tasks to Automated tasks and then to Autonomous systems. It will pervade across all the industries irrespective of their rendering to their end customers – Product or Service. Industry 4.0 will integrate both physical and digital world, enable more holistic and intelligent decisions. With huge inflow of data, it is up to the industry to decide on what to do with it. While there is always clarity in strategic intent, difficulty arises during execution which will impact competitive advantage. Technology will not be the cure for all the ills prevailing in the Industry. But, CMA's have to live with technology because processes will be done digitally and through autonomous systems. CMA's should have patience but avoid procrastination and gear up to face the upcoming Industry 4.0 challenges in a confident and professional manner.

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M-A-A Transition

Manual tasks – Automated tasks – Autonomous systems. Well this seems to be the broad consensus in Industry 4.0, at this stage. We also experience the changes at our home – TV, Fridge, Air conditioners etc., The notion that Industry 4.0 was applicable only to factories is no more applicable as the current trend indicates that this will pervade across all the industries irrespective of their rendering to their end customers – Product or Service. It is also widely expected to touch our personal lives as all the equipment's at our home will get connected and autonomously trigger alerts (based on various pre-set parameters, once it gets connected with server or other devices) so that it remains productive, reaches full life cycle effectively and withdrawn in a systematic eco-friendly manner.

Industry 4.0 is likely to change the way we design, develop, deploy, move them to different locations, store, replenish and replace them in a cyclical manner. Today, automobiles (two wheelers, cars, trucks etc.,) run beyond their life in India. In future, this will be difficult, as each vehicle will get identified and connected with a centralised server. After completion of estimated life, vehicle will be completely assessed for further usage. Only if it is worth to ply and does not increase pollution, vehicles will be allowed in the future. High Security Registration Plates has come into force and applicable to all new vehicles sold, on or after 1st April 2019 is in that direction. The unique high security registration plate is expected to be linked electronically to the vehicle after its affixture on the vehicle on registration.

Industry 4.0 will integrate both physical and digital world. This will enable more holistic decisions. Re-active mode will pave way for more pro-active and active decisions. As the data flows continuously or streamed live from the design room, testing area, shop floor, quality labs etc., companies can take the learning's and can adjust the processes in real or near real time. This will lead to intelligent decisions, better designed products, efficient use of organisation resources, productive & cost effective shop floors and finally will provide higher ability to predict future needs. This can create "first mover advantage" situations and will contribute to company's growth with improved profitability.

Industry 4.0 will comprehensively cover the entire gamut of business operations - Market forecast, Factory capacity planning, Make or Buy, Schedules to Suppliers, Inbound Transportation arrangements, Material Inward, Line feed, Labour deployment, Supervision, WIP tracking, Marketable products, Packing Methodology, Quality checks & dispatch clearance, Outbound transportation – all these will be tracked, assessed in real or near real time. In fact, many line changes will be done in response to market feedback received for the earlier dispatches or from the testing yard. Flexibility, response to market, sense of urgency etc., will be driven digitally as the data flows continuously to various levels of Management. But, it is also imperative for the person who receives the information to act on time so that the organisation will reap the benefits from various autonomous systems. Ex. Based on Customer Order Feed, set-up changes in the tools will be done, then Machines can communicate and provide alert on tooling amortisation. In fact, the future competitiveness will be determined more in the above "Decision Making" area apart from Price & Cost competitiveness.

With huge inflow of data, it is up to the industry to decide on what to do with it. While there is always clarity in strategic intent, difficulty arises during execution. But, business excellence is always a combination of strategic & operational excellence. At the top, since few people are there, it is possible to bring in consensus, alignment and clarity in strategic objectives. It is like driving in Indian roads with nil or less traffic. Challenge arises when you need to drive in traffic. Most of organisation chaos arises as more people are involved in different processes, activities etc., Major challenge here is to bring in organisational alignment with strategic goals so that resources, including human resources, are engaged in a productive and cost effective manner. If the goal or intent is to catch the Elephant, more data should not lead towards catching ants. Energy, Effort and Time differs for both. Similarly, while small or minor activities are required in any organisation, strategic goals should not get missed out due to huge volumes of continuous data. In fact, it will be prudent for an organisation to have an internal domain expertise, so that data utilisation can be tracked and course corrected based on the actual usage in business decisions.

Industry 4.0 – Opportunities & Constraints

Going forward it will be a major challenge for all CMA's. The impact of technology is often felt after entries are posted in the books of accounts. But, Management expectation is that CMA's have to play a pro-active role on a consistent basis. CMA's should not assume that due to technology advancement, compliance will be 100% and the books of accounts will always furnish "true and fair view". CMA's should develop interest and take efforts in the technology advancement, more so, with the type of technologies in his or her own organisation.

The following will give an idea on the challenges likely to

be faced by our profession in the next decade or so.

BS VI Transition –

After demonetisation and GST, the next big event for Indian Automobile Industry will be BS VI Transition, effective from 1st April 2020. The challenge in the new emissions era will largely pertain to investments in technology, which will lead to pricier products or services. Many companies plan to leverage its competencies (local, global) to meet the emissions challenge head-on, which will largely involve around product cost structure. Each player wants to make a strong pitch for the top slot, which goes beyond numbers as they want to be perceived as a company that is ahead of the rest in fuel injection technology. By 2023, India will be on par with regulations in Europe, because of second phase of BS VI which is expected to have onboard diagnostic systems for emissions control. This will facilitate easy exports to Europe. This will create tremendous competitive advantage for companies operating in India and make a strong business case with their parent company, normally located outside India.

Volkswagen episode –

Recently, The National Green Tribunal slapped a fine of Rs.500 crore on German auto major Volkswagen for damaging the environment through the use of "cheat device" in its diesel cars in India. A 'cheat' or 'defeat device' is a software in diesel engines to manipulate emission tests by changing the performance of the cars globally. Original compensation amount was Rs. 171.34 crore, but got enhanced by the tribunal so that it will act as "deterrence." The auto maker still claims that they did not violate the BS-IV norms and that the test results were based on "on road testing's" for which there were no prescribed standards. Earlier, they have admitted to the use of 'defeat device' in 11 million diesel engine cars sold in the US, Europe and other global markets to manipulate emission test results.

Boeing 737 Max8 episode –

Within 5 months, the new generation aircraft went down two times. After the second crash, many countries decided to ground the aircraft. India's DGCA also ordered MAX planes out of the skies. It comes at a difficult time, as the industry is in severe financial woes. New gen aircraft was expected to be more fuel efficient along with enhanced safety standards. But, these accidents have severely dented the image and have created more uncertainties in the consumer's minds. In this case also, based on various newspaper reports, it appears that software update was originally planned in end 2018 got delayed and is expected to be ready by April is the reason behind the crashes. This delay is now part of the intense scrutiny. The updates are intended to address how the aircraft's flight control system – MCAS (Manoeuvring Characteristics Augmentation System) responds to erroneous sensor inputs.

Upskilling for Industry 4.0

IBM to train STEM skills in India

As part of their multipronged global initiative to close the STEM (Science, Technology, Engineering, Maths) skills gap and prepare the workforce worldwide for "new collar careers", IBM proposes to train two lakh women in India. This has become relevant as Industry usage of emerging technologies such as AI, Big Data, Robotic Process Automation etc., will require right resources and more women in the workforce will be required to meet India's growing economy requirements.

Kirloskar Brothers Ltd., – 100th year of incorporation as a public limited company

Recently, Company unveiled its future roadmap and emphasized that it will rest on ethical growth leveraging through breakthrough technologies. They explained that their journey over the next century will be based on product and service differentiation through disruptive technologies. It will be a combination of Internet of Things (IoT), Artificial Intelligence (AI), Virtual Reality and Augmented Reality (VR/AR), 3D printing etc., They also plan to carry out extensive skill-set creation and training programmes so that students are well versed with modern systems and processes which are relevant to Industry needs. This is a move towards the objective of "Make in India".

Role of CMA

All the above, indicates that Technology will not be the cure for all the ills prevailing in the Industry. But, Industry will thrive only through Technologies. CMA's have to live with technology because processes will be done digitally and through autonomous systems. Therefore, it is

imperative for CMA's to understand the Industry practices and the technology influences on the business transactions, accounting & practices.

"The call and need of a new era is for greatness. Tapping into the higher reaches of human genius and motivation requires leaders to have a new mind-set, a new skill-set, and a new tool-set"

- Stephen R. Covey

CMA's role should be a combination of

- Being pro-active (well-planned, visualize the organisation's big goals),
- Being active (stay focussed on the plans and execute excellently) and
- Being re-active (sense of urgency, dynamic to business needs, market response).

It will be a 3D (dimensional) approach which will help CMA to play a big role in Industry 4.0.

"Most people overestimate what they can do in one year and underestimate what they can do in ten years."

– Bill Gates

CMA's should have patience but avoid procrastination. Have passion in the profession and gear up to face the upcoming Industry 4.0 challenges in a confident and professional manner.

"We must use time wisely and forever realize that the time is always ripe to do right" –

Nelson Mandela.

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COST ACCOUNTING & AUDIT – THE FUTURE

Abstract

In this era of hyper competitive market where every business is witnessing unprecedented technological disruptions, sustainability can be built only by focusing on "cost" and "value". With an aim to infuse & strengthen the culture of cost competitiveness in all companies in India, a paradigm shift was first made in 2011 in the domain of Cost Accounting & Cost Audit. Owing to enactment of Companies Act in 2013, this shift remained short lived. Successful efforts were made to restore a significant part in 2014 but the need of the hour is to "manthan" and assess where we are, what we want, how we can achieve, and how we can turnaround the future of cost accounting & audit profession in India. Equally, there is need to create well trained CMAs, support the regulatory framework, undertake research studies and convert the existing framework as a value added tool for the industry – all this requires focused approach at the Institute.

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By the time this article reaches you, elections to the Central and Regional Councils of the Institute would be mid-way and soon, we all will pound our hundreds of wishes on the newly elected leaders. This short [first time] article is intended to help the new team of Central Council Members and in-turn also the entire CMA profession.

By this time, nearly five years have passed since the Companies (Cost Records and Audit) Rules, 2014 were first notified on June 30, 2014. Since then these rules were amended on six occasions, vide notification nos. GSR 01(E) dated 31.12.2014, GSR 486(E) dated 12.06.2015, GSR 695(E) dated 14.07.2016, GSR 1498(E) dated 07.12.2017, GSR 1526(E) dated 20.12.2017 and GSR 1157(E) dated 03.12.2018.

In the domain of Cost Accounting [& Cost Audit] in India, 1940s to 1964, 1965 to 2010, and 2011 to 2013 were distinct historic periods that are now meant for only the researchers & academicians. But for some reasons, we find difficult to forget the short-lived 2011-13

history that had brought much needed change by setting New Framework of Cost Accounting Records and Cost Audit in the corporate sector that was, in realty, intended to strengthen the corporate governance, infuse culture of cost competitiveness in all companies and improve regulatory mechanism in the country. Despite all good objectives and sincere efforts, the change was short-lived. [We will not discuss the reasons & persons behind this downfall. It will do more harm.]

Time has come to assess where we are, what we want, how we can achieve, and how we can work as "team" and turnaround the future of cost accounting & audit profession in India. It is also the time to find how well we have guided and trained our members to undertake system studies & apply managerial analytics; identify value creation areas & critical success factors & their inter-linkages; assess the competitiveness factors & suggest solutions for each industry; build frameworks to improve efficiency, productivity, cost competitiveness, profitability, and sustainability; and help companies to improve their business planning, budgeting, resource allocation, resource utilization, and investment decisions so as to survive & thrive in a changing and challenging environment.

Let us first assess what the present [outgoing] Council could do or achieve in last four years. While the completely lost ground was largely restored by the changes made on December 31, 2014 i.e. during the regime of 2011-15 Council; details of further little changes made since July 22, 2015 till date are summarized below.

Changes in scope [Tables A & B]

Industry/Sector/ Product/Service	Changes made
Telecommunication Services	Addition of activities that requires authorization or license issued by the Department of Telecommunications, Government of India under Indian Telegraph Act, 1885 (13 of 1885)
Electricity	No change in scope; however exemption granted for generation of electricity for captive consumption was more clearly defined
Petroleum Products	No change in CETA Codes; however activities regulated by PNGRB were made as an additional inclusion
Port services	Scope enhanced by substituting the words "by a Port" to "for a Port"
Aeronautical services	Scope enhanced by substituting the words "by airports " to "at the airports"
Railway rolling stock	Addition of CETA code 8609
Jute & Jute Products/ Textiles	Addition of CETA code 5307
Pulp & Paper	Addition of CETA codes 4701 to 4704
Medical devices	Word "deflobillator" substituted by "defibrillators"

Changes in other parts

- After introduction of GST Laws, Customs Tariff Act Heading was substituted for Central Excise Tariff Act Heading;
- The term "cost audit report" was re-defined to correctly assign the meaning thereto being the report on the cost records and cost statements examined by the cost auditor;
- The term "Indian Accounting Standards" was introduced;
- Insertion of sub-rule (1A) below rule 6 providing for the cost auditor to submit a certificate before being appointed – this is akin to similar certificate to be given by the financial auditors as per Rule 4 of the Companies (Audit and Auditors) Rules, 2014;
- Insertion of proviso below rule 6(3) for removal of the cost auditor;
- Insertion of sub-rule (3B) below rule 6 providing for cost statements to be approved by the Board of Directors for submission to the cost auditor to report

thereon – this is akin to the provisions of section 134 (1) of the Companies Act, 2013;

- A small correction made in rule 6(5);
- Sub-rule (6) of rule 6 was amended for the filing of cost audit report in Form CRA-4 in XBRL;
- Insertion of proviso below rule 6(6) for filing of cost audit report within the extended time to hold AGM; and
- Requisite modifications in CRA-1 to CRA-4.

In short, it is visible that last four years were not of much success. We know that a lot still needs to be done & should be done on priority. Now we have pinned all our hopes on the newly elected representatives who would soon take guard of the Institute's affairs. We have always aspired for enhancing the scope of Industries, Sectors, Products & Services under the Companies (Cost Records and Audit) Rules, 2014. Yes it should be done, but how & why?

My first suggestion is to consolidate what we already have. There are feelings that large numbers of companies that are covered under these Rules have so far failed to comply. Therefore, our first target should to find such non-compliant companies. We have so far relied on the Government efforts, but not with much success. Why not we put-in our own resources & efforts? The task is very simple and well tested; will give enormous benefits.

For this and as a first step, the Institute should set-up a designated Cell in its Delhi office to address all issues relating to cost accounting records and cost audit. This cell should be manned by qualified & experienced professionals. All members who are privy to any information relating to a non-compliant company may be requested to share it, in confidence, with this cell. The data so collected may be later shared with the MCA [Cost Audit Branch] for suitable action at their end.

As per 4th Annual Report on Working & Administration of Companies Act, 2013, published by MCA, there were 11,67,858 active companies as at the end of March, 2018. Of this, 2,33,736 companies were engaged in manufacturing, 1,05,162 in construction, 13,963 in electricity, gas & water, 11,938 in mining & quarrying, 74,729 in real estate & renting, and 34,921 in transport, storage & communications. We need to explore this data.

Let us first target the companies having overall annual turnover from all its products and services during the FY 2017-18 of at least Rs.100 crore. Why FY 2017-18 – one this is the latest year for which filings are largely over; and two, this year's results can be used as immediately preceding FY for deciding the applicability of Companies (Cost Records and Audit) Rules, 2014. The target is to find such non-compliant companies that are engaged in the production of the goods or providing services specified in Tables A & B and may get covered under cost audit as per the threshold limits specified in Rule 4, Sub-rule (1) or (2) of the Companies (Cost Records and Audit) Rules, 2014. For this, the Institute should collect following details from the Ministry of Corporate Affairs. Not an easy job, but sincere & persistent efforts of the Council Members would help.

- List A – Details of all commercial, industrial & power companies having total turnover of Rs.100 crore or more during the financial year 2017-18. The details required are CIN, Name of the company, address of registered office, type of industry, e-mail id of the company, phone(with STD code), [gross turnover, & product/ service category code with turnover in non-XBRL filing cases], and [revenue from sale of products, revenue from sale of services, other operating revenue, and total revenue from operations in XBRL filing cases].

  Note: Before finalizing the details, discuss with the concerned officers in MCA handling the MCA-21 data.

- List B – Details of all companies that have filed Form CRA-2 with MCA for the FY 2017-18. The details required are CIN, Name of the company, and FY to be covered. MCA received 8388 Form CRA-2 and 7310 Form I-XBRL & CRA-4 during 2017-18.

A comparison of the aforesaid two data would first remove the compliant companies given in list B from list A. Study & plot the business & product/service profile of balance companies by using available primary/secondary sources. For example, GST data could be of great help and the Institute has already signed an agreement with GSTN for mutual sharing of data. Other sources include Stock Exchange data for listed companies, details available on the company's website, Google search, etc. In fact, the CIN itself includes industry code. Pick-up the companies where their product and/or service profile match with that given in Tables A & B below rule 3, as in all likelihood, these companies fall within the scope of Companies (Cost Records and Audit) Rules, 2014. Share these details with the MCA [Cost Audit Branch] alongwith the data/information collected & analyzed for suitable necessary action at their

end. This exercise would certainly add huge numbers and widen the scope without any need to amend the existing Rules.

Similar exercises may be later done for companies having overall annual turnover from all its products and services between Rs.50-100 crore; and then with annual turnover between Rs.35-50 crore to further identify non-compliant cases for cost accounting records and cost audit. On the face, all such exercises look difficult, but a sincere effort at the Institute level would be of great contribution for the CMA profession and strengthen the regulatory hands of the Government. [CAB have done it in past with great success, though the entire framework put-in place in 2011 was suddenly dismantled in 2014, so it could not be fully utilized.]

We will now proceed with the remaining data, after excluding the compliant and non-compliant cases. Graph the data according to the nature of Industry, Sector, Products produced or Services rendered. Exclude those categories of companies where we are not likely to pursue their coverage under the Companies (Cost Records and Audit) Rules, 2014. These could be either such industries where we find application of cost accounting is still at its nascent stage or those, where the number of companies is too small. Examples may be financial services, leasing operations, insurance sector, etc. Balance list is your potential customers.

Now we examine each industry or sector in greater detail and find justifications for their coverage under the mandatory framework of cost accounting & cost audit. Discussions must be done with the industry representatives, senior Government officers, & regulators and also deliberations made in open seminars to be held across the country. The end-objectives should be to find how this mechanism would help improve the competitiveness of corporate entities, provide cost data to the Government to devise people benefit economic & pricing policies, help regulatory authorities for ensuring effective regulation, and convince the public for their support. Share these sectoral studies with all stakeholders, including the Government. It would surely result in getting positive response.

As the Institute level, we should in-parallel thrive; in proving this fact that the framework of cost accounting is, in reality, meant to give high value addition to the industry. The CII-TCM is achieving this with great success. At the same time, this mechanism should become net contributor to all the external stakeholders by providing analytical, accurate & quality data to the government; supporting the tax authorities & other regulatory bodies; and helping the society at large. This requires conducting research studies by using, both primary & secondary data. The sectors chosen should be from that covered under the existing scope of Companies (Cost Records and Audit) Rules, 2014. These could be, for example, highly demanding & mass-appeal sectors viz. Telecommunication, Electricity, Petroleum Products, Drugs and Pharmaceuticals, Aeronautical services, Toll Roads, Health services, Education services, & Medical devices. A research cell, set-up in the Institute, manned by high quality & experienced professionals, research associates, and economists would provide necessary impetus in undertaking the suggested research studies. These would certainly have a mass appeal and effective usefulness.

Before I close, we need to ask ourselves, what is the sustainable value of the CMA services so that we can address the challenges in building their skills and bring them to a focal point. To succeed, we need to set high benchmark for cost accounting and audit services provided by the members of the Institute. This requires first changing our focus, & then our sustained efforts in skill upgradation and issuing very high value standards, guidance notes, technical monographs, etc. Case studies provide great help. We must promote CMA professionals to share their valuable experiences in penning such case studies.

If profession desires, I would continue my vision with more articles in the series. This would cover topics on changes required in the cost auditor's report & cost statements; how to convert the existing framework as a value added tool; what other significant areas be explored for expansion of CMA services; how to undertake members' skill upgradation, etc. MA

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LABOUR COST VARIANCE ANALYSIS THROUGH DIAGRAMS - INTEGRATION TO MIS

Abstract

Variance Analysis (standard costing) is one of the most important and useful topic in Management accountancy. But unfortunately, it has not gained much popularity among the students and professionals as well. The reason for such apathy probably is attributable to the complexity and diversity of the forgettable formulae involved in such analysis. In this article, solution of a comprehensive Labour Cost problem has been demonstrated through innovative diagrams which are in complete harmony with the original formulae. The diagrams are simple, easy to understand and memorize. Moreover the visualization aspect of the diagrammatic representation of variance analysis has the potentiality to step into the arena of a MIS in industries

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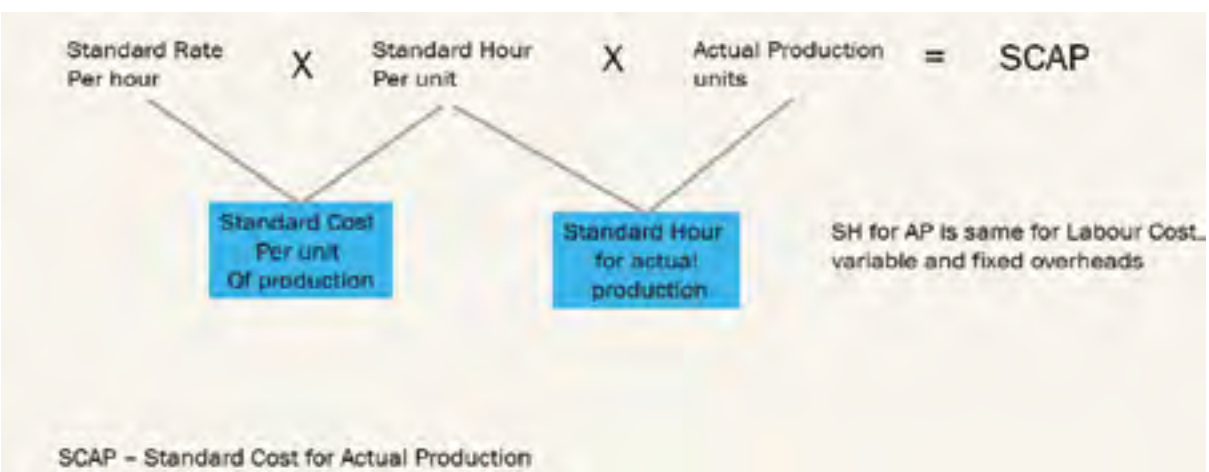
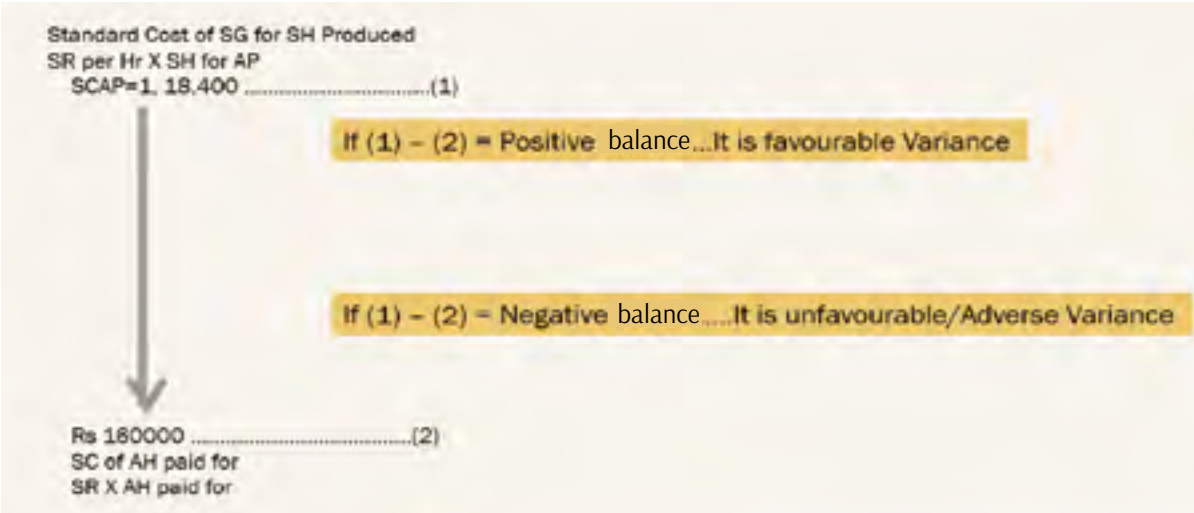
Basics of VARIANCE ANALYSIS for LABOUR COST



Understanding of the Diagram

A diagram consists of three or more arrows having bottom and spearhead with amount of components in both sides. Amount standing at the spearhead side should be deducted from that of bottom side. While the resulting positive balance automatically signifies a Favouable variance denoted by "F", a negative balance signifies an unfavourable or adverse

variance denoted by "A". The following diagram would give a clear understanding of "F" or "A" variance.



Abbreviation of components used in the diagrams of Variance Analysis.

SC of SG for SH	Standard Cost of Std Gang for Std hour produced
SCAP	Standard Cost of Actual Production
AC	Actual Cost
SC of AG for AH	Std Cost of Actual Gang for Actual Hours
SC of RSH	Std Cost of Revised Std hours
SC of AG for PH	Std Cost of Actual Gang for Productive Hours
SC of SG for PH	Std Cost of Std Gang for Productive Hours

Comprehensive example on Labour Cost Variance

Standard

Workers	Number	Wage rate/Hour
Male	30	Rs. 80
Female	15	Rs. 60
Youth	10	Rs. 40

55

In a normal working week of 40 hours, the group is expected to produce 2000 units of output.

Actual

Number	Wage rate/Hour
40	Rs. 70
10	Rs. 65
5	Rs. 30

Actual production is 1600 units. 4 hours were lost due to abnormal idle time

Calculate 1. Labour cost Variance, Wage Rate Variance and Efficiency Variance

Calculate 2. Labour cost Variance, Wage Rate Variance, Efficiency Variance and Gang Variance

Calculate 3. Labour cost Variance, Wage Rate Variance, Efficiency Variance, ~~Gang Variance~~ and Idle time Variance.

Calculate 4. Labour cost Variance, Wage Rate Variance, Efficiency Variance, Gang Variance, ~~Idle time Variance~~ and Yield Variance

Calculate 5. Labour cost Variance, Wage Rate Variance, Efficiency Variance, ~~Gang Variance~~, Idle time Variance and Yield Variance.

Calculate 6. Labour cost Variance, Wage Rate Variance, Efficiency Variance, Gang Variance, Idle time Variance and Yield Variance.

Solution 1.

In this problem, actual production is 1600 units. Standard time for 1600 units Is 32 hours, as computed below.

	Output (units)	Std Hour
Standard	2000	40 per week
For	1600	32 per week

Std Cost of Std Gang for SH produced i.e. Standard Cost for 1600 units (AP)

Worker	No	SH	SH for AP	SR (Rs.)	Total Amount (Rs)
Male	30	32	960	80	76800
Female	15	32	480	60	28800
Youth	10	32	320	40	12800
	55		**1760**		**118400**

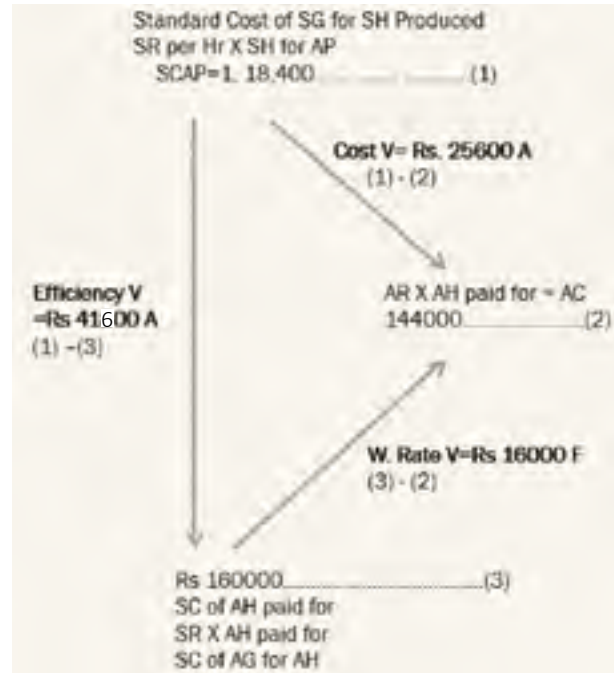
Actual Cost of Actual Gang for Actual Hrs i.e. Actual Cost for 1600 units

Worker	Number	AH	Total AH	AR (Rs.)	Total Amount (Rs)
Male	40	40	1600	70	112000
Female	10	40	400	65	26000
Youth	5	40	200	30	6000
			2200		**144000**

Std Cost of Actual Gang for Actual Hrs I.e. Standard Cost of AH paid for

Workers	AH	SR (Rs.)	Amount (Rs.)
Male	1600	80	128000
Female	400	60	24000
Youth	200	40	8000
	2200		**160000**

The total amounts as shown in the tables are to be put in the designated place of the diagram for computing variances.



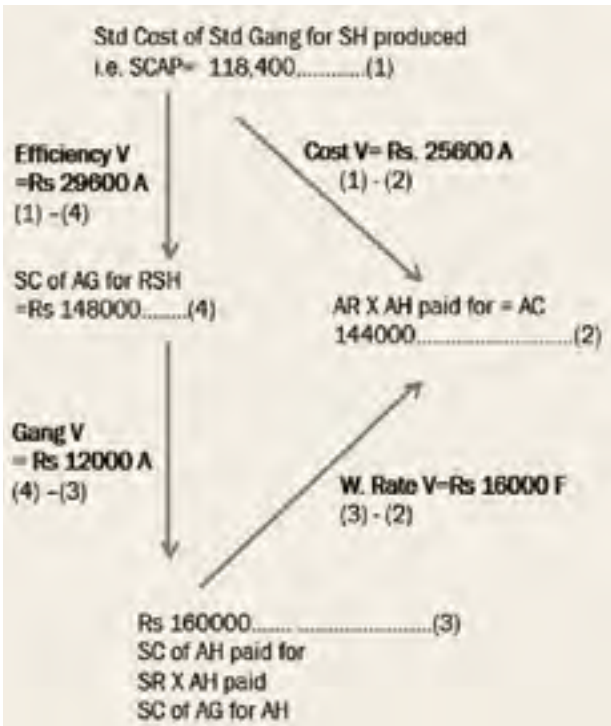
Solution 2

For analysing Gang Variance, SC of Actual Gang for RSH is required to be worked out

Standard Cost of AG for Revised Standard Hour

Worker	Std Proportion of actual Hr	RSH	SR	Total Amt (Rs.)
Male	2200 X 30/55	1200	80	96000
Female	2200 X 15/55	600	60	36000
Youth	2200 X 10/55	400	40	16000
		2200		**148000**

The total amounts as shown in the tables are to be put in the designated place of the diagram for computing variances.



Solution 3

Calculate Labour Cost V, Wage Rate V, Efficiency V and Idle time V

To find out idle time V, one needs to compute Standard Cost of Actual Gang for Productive Hours

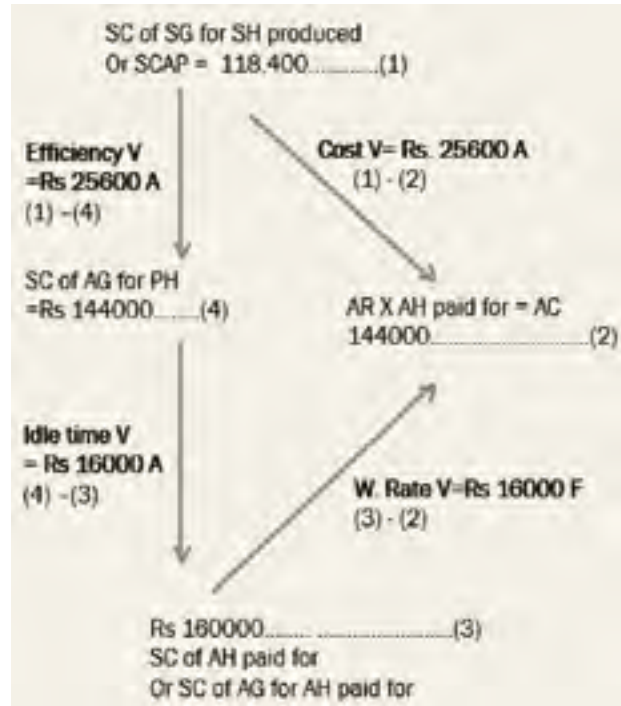
Productive Hours = Normal Hours – Idle Time

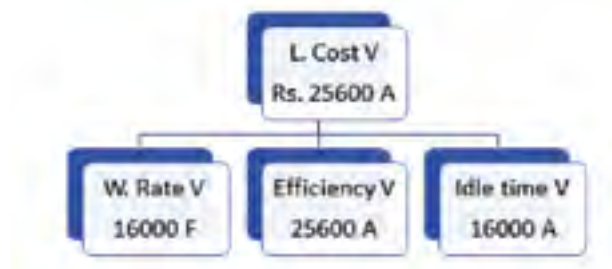
(PH) =40 Hrs – 4 Hrs =36 Hrs

Worker	Number	PH	Total PH (No X PH)	S Rate (Rs.)	Total Amount
Male	40	36	1440	80	115200
Female	10	36	360	60	21600
Youth	5	36	180	40	7200

1980

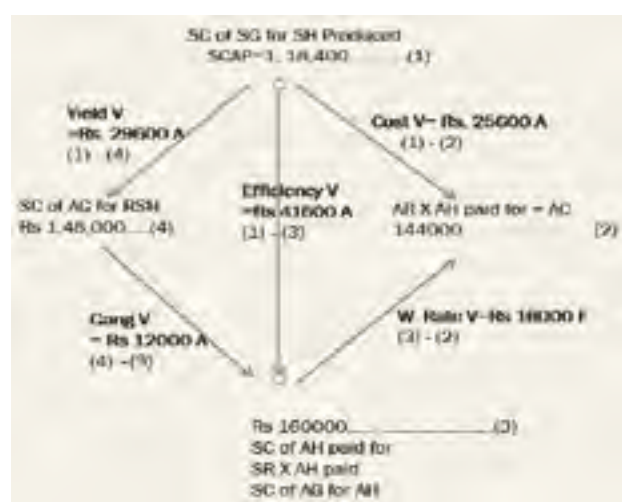
The total amounts as shown in the tables are to be put in the designated place of the diagram for computing variances.





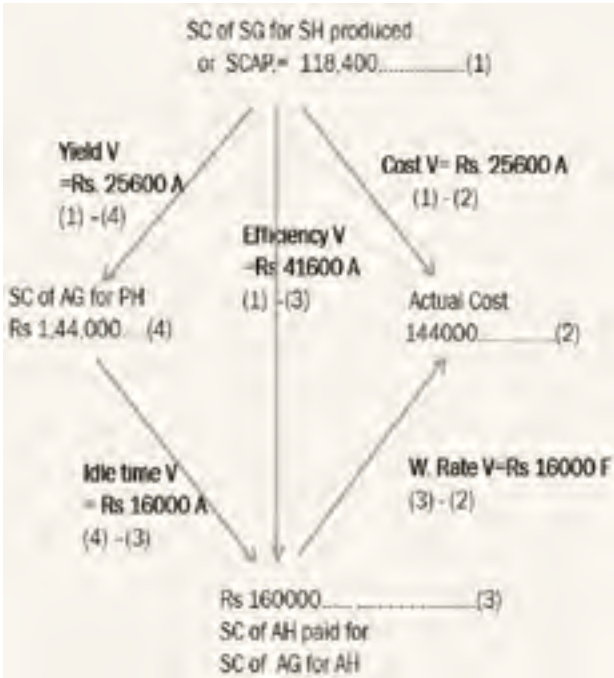
Solution 4

Calculate Labour Cost V, Wage Rate V, Efficiency V, Yield V, and Gang V



Solution 5

Calculate Cost V, Wage Rate V, Efficiency V, Idle time V and Yield V



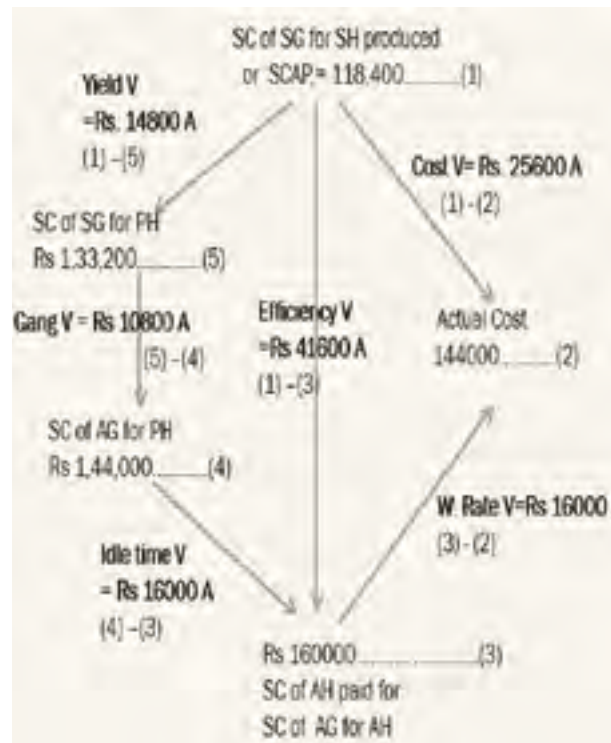
Solution 6

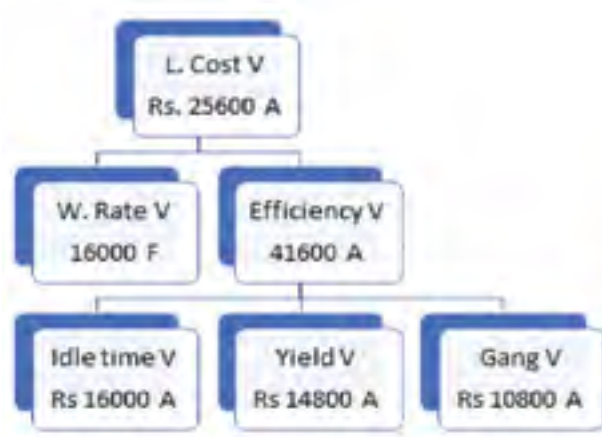
Calculate Labour cost V, Wage rate V, Efficiency V, Idle time V, Gang V and Yield V i.e. Comprehensive Variance

In this problem instead of computing Standard Cost of RSH you have to compute Standard Cost of Standard Gang for Productive Hours apart from other relevant components.

SC of SG for PH

Worker	Number	PH	Total PH	SR (Rs.)	Total Amount
Male	30	36	1080	80	86400
Female	15	36	540	60	32400
Youth	10	36	360	40	14400
			1980		**Rs 133200**





Verification of (1) Yield Variance and (2) Idle time Variance.

Formula for Yield Variance

= SR of Yield (Actual Yield – Standard Yield from Actual Mix in PH)

= Rs 118400 / 1600 Units (1600 Units – 1800 Units)

= Rs 74 X (- 200 Units) = Rs 14800 A

Standard Yield for Actual Mix in PH

(PRODUCTIVE HOUR)

	Input	Output
Standard	1760 (PH)	1600 (Units)
for	1980 (PH)	1800 (Units)

Formula of Idle time Variance = Idle Hours X Standard Rate per Hour

Workers	Number	Idle time (Hrs)	Total Idle hrs	SR (Rs.)	Amount (Rs.)
Men	40	4	160	80	12800
Women	10	4	40	60	2400
Young	5	4	20	40	800
			200		**Rs 16000 A**

Advantages of using Diagrams

- Diagrams wear a simple Flow-chart or Road-map like look which is easy to understand, use and memorize. Memory need not be burdened with a variety of complex and confusion-raising formulae.
- Variances are quite is harmony with the relevant formulae.
- Inter-relationship of different variances derived in a diagram and the relating constituents (all logically arranged) are clearly visible at a glance.
- Nature of variance (Favorable or Adverse) is clearly visible due to in-built system of the diagram.
- Diagram works as a catalyst for instant solution of some problems.
- Inconsistency if any, in the derived data is instantly understood and rectified.
- Standard cost, Actual cost in respect of Material, Labour & Overheads and Actual Sale, Standard Sale & Budgeted Sale etc. and their core variances crystallized in specific location, facilitate speedy reconciliation.
- In Working Back problems location of missing data can be visualized and computed easily.
- In case of a comprehensive problem involving Material, Labour, Variable & Fixed overheads, similar diagram for each may be drawn at the first instance and thereafter the available data may be tabulated in respective locations for working out relevant variance.
- The above advantages / facilities suggest that diagrams are excellent time-saving device and hence, may claim superiority on it own merit over traditional method of solution of variance Analysis problem, by applying a variety of formulae.

Integration of Variance Analysis through diagram to MIS

A MIS is an information system used for decision-making and for other co-ordination, control, analysis and VISUALISATION of information. Information systems are formal organization systems designed to collect, process, store and distribute information.

A diagrammatic representation of variance Analysis helps management to visualize at a glance all the information relating to logically arranged variances along with their constituents. These advantages /facilities are unimaginable in respect of variances worked out in the traditional method by the application of a variety of forgettable and confusion-raising formulae. Hence, variances derived and noted in the parenthesis of a diagram is believed to be a much more superior device for presentation in a MIS than that of conventional method. On this subject, the age-old proverb may be reckoned to – " A picture states thousand words spoken". This alone is enough to be considered for integration of "Variance Analysis through diagram" to a MIS. MA

Reference

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ARE MERGERS AND ACQUISITIONS A QUICK WAY FOR COMPANIES TO GROW –

A CASE STUDY FROM THE ACQUISITION OF FEM PHARMACEUTICALS BY DABUR LTD

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Abstract

To maintain growth, a company must take certain growth strategies, either internal or external. This paper highlights some of the changes and growth strategies adopted by Dabur Limited to maintain its strong position in the FMCG sector since its 127 years of existence. Further, it focuses on the acquisition of Fem Pharmaceuticals by Dabur Ltd. in the year 2008 and its impact on the performance of the consolidated entity. The result shows that there has been a significant rise in share prices and also a positive effect on the Net Sales, operating profit, PAT and shareholders' Equity. The overall conclusion supports the fact that acquisitions, if made carefully and wisely, can lead to substantial growth of an organisation.

To maintain growth, a company must take certain growth strategies, either internal or external. Internal strategies refer to funding the growth with internal finance, which is made by ploughing back of profits. Other internal changes a company can bring in includes better management of supply chain, cost control and cost reduction measures, improved debtors or creditors management, etc. This paper focuses on some of the changes and growth strategies adopted by Dabur Limited to maintain its strong position in the market of FMCG and also studies whether the acquisition of Fem Pharmaceuticals Ltd. has contributed towards its growth.

Dabur India Ltd. is one of the most trusted companies in India's FMCG sector with more than 127 years of presence. It was originally established as a small pharmacy by Dr. S K Burman, in 1884, in Kolkata, specialising in providing a wide range of health care products based on the traditional science of Ayurveda. It converted itself into a private limited company in the year 1936. Since its establishment, it has continuously launched various innovative products including India's first packaged and branded Chyawanprash, hajmola tablets, which was later modified as hajmola candy for children, the herbal toothpaste, Dabur Lal dant toothpowder and paste, and a number of other products including proprietary ayurvedic medicines like Nature Care Isabgol, Madhuvaani, etc. Later it widened its presence in the food sector, fruit juices, personal care segment, etc. The flagship brands of Dabur include Dabur, as the master brand for natural heathcare products, Vatika for hair care products, Real for fruit based beverages and Hajmola for digestives. Today, it has also spread its presence worldwide as the world's largest Ayurvedic and natural health care company.

Fem Care Pharma enjoyed a leadership position in hair removal cream and fairness bleach category with its brand 'FEM'. Some of its other renowned brands includes Oxybleach cream, Botanica anti-ageing cream, Stratum colour protecting hair conditioners and SAKA men's bleach, fabric softeners and stain removers under

the brand 'Bambi'. Fem products were distributed in around 10 lakhs outlets and 25,000 parlours directly. Its products were also exported to UAE, Yemen, Oman, Maldives, Mauritius, Malaysia, Sri Lanka, Bangladesh, Myanmar and Nepal. Its women care products (bleach and hair removing creams) were widely popular in US and Middle East.

Different growth strategies adopted by Dabur Ltd.

Dabur has proven time and again to be a market leader and have adopted a number of policies to sustain growth and profitability of the company over time. Some of the organic strategies for growth adopted by the company include the change in working capital and cost management policies adopted by it to improve its working ratio of 3:2 and quick ratio of 2:4 in late 1990s to one of the most efficient in the FMCG sector in 2005-06. In fact, it turned almost into negative working capital, with the current ratio declining to 0.8 and the quick ratio to just 0.4 in 2004–05, which was actually the target of the new management team which took over charge in 1998 and had targeted to achieve a zero net working capital. To achieve this, JIT system of inventory management was followed, the inefficient debtors' management policy was changed and more efficient policy was introduced. The cheque collection period was reduced from 1-10 days to only one day for in town depots of stockists, while it continued being 1-10 days for remote stockists. The cheques collected from outstation were immediately sent to the local bank for collection instead of being sent to the head office first and then for out station clearing, thereby improving cash management. For stockists whose cheques bounced twice were allowed further stocking of product with the condition to make further payments only through cash or demand drafts. Better coordination between inventory planning, acquisition and usage departments etc. resulted in better supply chain management, thus reviving the company's position.

Dabur further adopted a Brand Optimization Strategy in 2004 for reviving its corporate entity. The basic reason behind this was that the consumers perceived Dabur products to be associated with the 35-plus age group. It was further observed that 70 percent of Indian population was below 35 years and these were also the people with high disposable income. To catch this segment of the society, Dabur changed its brand image from the old looking Banyan tree to younger and fresh looking Banyan tree. 'Celebrate life' became the new brand essence that captured the thought process of all age groups. Further, there was another identity change, specifically for the product brands. Since the logo with the tree was too heavy to be easily merged with different product brands, Dabur was written in a leaf format to be used with different individual product brands. As a change in its marketing strategy, renowned personalities like Amitabh Bacchan, Vivek Oberoi, Rani Mukherjee and Virendra Sehwag were selected for brand endoresements. Once again, as an impact of all these, the Dabur's market share increased.

Among the inorganic strategies for growth, Dabur has undergone mergers and acquisitions with a number of organisations including the acquisition of Hobi kozmetic Group in Turkey in 2010, acquisition of the brand '30 Plus' from Ajanta Pharma in 2011, Discaria Trading in 2016, D&A cosmetics in 2017, etc. One of the acquisitions worth mentioning is the acquisition of Fem Care Pharma Ltd. in 2008 for over 270 crores.

Transaction details

Dabur had initially acquired a majority 72.15% stake in Fem in November 2008 for Rs 203.7 crores in an all-cash deal and the remaining stake in June 2010 which became effective retrospectively from 1st April 2009. The shares were allotted in the ratio of 5:1 (5 shares of Dabur for every one share of Fem Pharma) as purchase consideration in the acquisition process. The acquisition was funded through internal accruals of Dabur India Ltd.

Strategic Rationale behind Acquisition

The motive behind the acquisition was to achieve the revenue or market synergies, as the acquisition of FEM would provide Dabur an access to the fast expanding skin care market through the already recognised brands of FEM both in domestic markets and abroad. The international presence of Jaquline brand of FEM would provide Dabur an international recognition and would thus provide an opportunity to launch its own branded products there. FEM's wide parlour outreach could also be leveraged by Dabur for marketing its own personal care products like Gulabari or Vatika.

The acquisition was expected to provide a synergic effect on sales and distribution, supply chain, marketing, sourcing and manufacturing. Media costs too could be reduced by combined advertisement programmes. Besides, the wide R&D knowledge of Fem in skin care segment would certainly add to the Dabur's already existing pool of knowledge and technical knowhow.

Methodology

Dabur Ltd. acquired Fem Care Pharma in 2008. To study the impact of M&As in the long run, financial data of four years prior to acquisition and four years post acquisition

have been considered for our study. Financials were studied thoroughly to analyze if there have been any significant difference in the net sales, operating profit, net profit and net worth. Paired t-test was performed to find if there had been a significant change in the financials of the company during the pre merger and post merger period.

For t-test, the null hypothesis taken was,

H_0: There is no significant improvement in the Net sales of the company during pre and post acquisition period

H_1: There is no significant improvement in the Operating profit of the company during pre and post acquisition period

H_3: There is no significant improvement in the PAT during pre and post acquisition period

H_4: There is no significant increase in the Net worth of the company during pre and post acquisition period

Further, we have studied the share price of Dabur India Ltd. from 1 Jan 2004 to 31 Dec 2014 to see the long term impact of the acquisition on the shareholders' wealth. The closing monthly share price of BSE was taken and the average share price of each calendar year from 2004 to 2014 was considered.

Results

In Rs Crores	Mar '13	Mar '12	Mar '11	Mar '10	Mar '09	Mar '08	Mar '07	Mar '06	Mar '05
Net Sales	6,176.12	5,305.42	4,104.51	3,404.15	2,819.58	2,373.35	2,049.41	1,870.55	1,497.37
Operating Profit	1,029.80	890.17	800.05	648.03	490.02	423.96	356.04	296.55	213.14
Profit After Tax	765.79	644.11	568.89	500.46	390.80	333.79	282.17	213.86	157.01
Networth	1,590.29	1,302.49	1,101.16	749.38	738.20	528.32	403.19	447.87	338.07
Percentage change in net sales	16.41%	29.26%	20.57%	20.73%	18.80%	15.81%	9.56%	24.92%	18.45%
Percentage change in operating Profit	15.69%	11.26%	23.46%	32.25%	15.58%	19.08%	20.06%	39.13%	33.90%
Percentage change in PAT	18.89%	13.22%	13.67%	28.06%	17.08%	18.29%	31.94%	36.21%	43.62%
Percentage change in Net worth	22.10%	18.28%	46.94%	1.51%	39.73%	31.03%	-9.98%	32.48%	25.84%

Study shows that the net sales increased by 20.73% in 2009-10 immediately following the year in which the acquisition was made, i.e 2008-09. There had been an increase of 28.06% in PAT in the year immediately following the year of acquisition and the operating profit also jumped from 490.02 crores to 648.03 crores, a dramatic increase by 32.25%, clearly showing the positive effect of the acquisition on the performance of Dabur Ltd.To test whether there have been any significant change in the Net sales, Operating Profit, PAT and Net worth in the four years prior to acquisition and four years post acquisition, paired t-test was conducted and the result was as follows:

t-Test: Paired Two Sample for Means

Parameter	p value	Conclusion
Net Sales	0.00789	less than 0.05, so null hypothesis is rejected
Operating Profit	0.00069	less than 0.05, so null hypothesis is rejected
Profit After Tax	0.00194	less than 0.05, so null hypothesis is rejected
Net Worth	0.01304	less than 0.05, so null hypothesis is rejected

The p value being less than 0.05 in all the above cases leads to the rejection of null hypothesis, showing that there had been a significant increase in the Net Sales, Operating profit, PAT and Net worth of Dabur India Ltd. due to the acquisition.

Long term effect on the share price of Dabur

Dabur India Ltd. (Share price as per BSE)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	201
12.92	47.68	45.60	51.36	46.01	62.16	94.62	102.99	115.50	155.31	203.3

Source: www.moneycontrol.com

The above chart is based on the average yearly price of the shares of Dabur Ltd. in BSE from 1 Jan 2004 to 31 Dec 2014. It is evident that there has been a clear and constant increase in the share price of Dabur Ltd. since 2008. The price increased significantly by 35% (from Rs 46.01 to Rs 62.16) in 2009, the year immediately following the acquisition and also the year when the remaining shares of Fem Pharmaceuticals was acquired thereby making it a fully owned subsidiary. It further increased by 52% in the very next year. This thrush in share price again shows that there has been an increase in the shareholders' wealth in the long run post acquisition.

Conclusion

Dabur has time and again adopted a number of internal and external growth strategies to maintain itself as a market leader in the FMCG segment. The acquisition of Fem Pharma by Dabur in 2008 resulted in a significant increase in net sales, operating profit, net profit and net worth of the shareholders of Dabur Ltd. The share prices also showed a constant increase since the acquisition. Thus, it can be concluded that the acquisition of Fem Care Pharmaceuticals was a significant step taken by Dabur to sustain and accelerate growth in the core FMCG sector. MA

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STATUTORY UPDATES

DIRECT TAXATION

Compiled by CA Vikash Mundhra

Tax Audit Report: No need to report GAAR & GST details in clauses 30C & 44 of Tax audit Report for A.Y. 2019-20 – Circular 9/2019 dated 14-05-2019

Section 44AB of the Income-tax Act, 1961 read with rule 6G of the Income-tax Rules, 1962 requires specified persons to furnish the Tax Audit Report along with the prescribed particulars in Form No. 3CD. The existing Form No. 3CD was amended vide notification no. GSR 666(E) dated 20-07-2018 with effect from 20-08-2018. However, the reporting under clause 30C and clause 44 of the Tax Audit Report was kept in abeyance till 31st March, 2019 vide Circular No. 6/2018 dated 17-08-2018.

It is further decided that the reporting requirements under clause 30C (pertaining to General Anti-Avoidance Rules (GAAR)) and clause 44 (pertaining to Goods and Services Tax (GST) compliance) of the Form No. 3CD shall be kept in abeyance till 31st March, 2020.

Inter-Governmental Agreement for exchange of country by country reports between India and the United States of America notified - Notification No. 37/2019 dated 25-04-2019

On 27-03-2019, an Inter-Governmental Agreement for Exchange of Country-by-Country Reports was entered into by the Government of the Republic of India and the Government of the United States of America.

In exercise of the powers conferred by item (ii) of sec. 286(9)(b) of the Income-tax Act, 1961, the Central Government notifies the said Agreement, as set out in the Annexure and all the provision of the said Agreement shall be given effect to in the Union of India in accordance with paragraph (1) of Article 5 of the said Agreement.

Amendment to Notification No 36/2019 dated 12-04-2019 w.r.t Part B of Form 16 - Notification No. 38/2019 dated 03-05-2019

Part B of the Form 16 has been modified by Notification No 36/2019 dated 12-04-2019. In modified Part B, effect for deduction u/s 80C, 80CCC and 80CCD(1) has been considered twice, in Aggregate of deductible amount under Chapter VI-A [at S. No. 11].

This notification has been issued to rectify the format in this regard.

Procedure, format and standards for issuance of certificate for TDS in Part B of Form No. 16 in accordance with the provisions of sec. 203 through TRACES – Notification No. 09/2019 dated 06-05-2019

Section 203 read with the Rule 31 stipulates furnishing of certificate of tax deduction at source (TDS) by the deductor to the deductee specifying therein the prescribed particulars such as amount of TDS, valid permanent account number (PAN) of the deductee, tax deduction and collection account number (TAN) of the deductor, etc. The relevant form for TDS certificate in case of deduction u/s 192 of Chapter XVII-B of the Act is Form No. 16 which is to be issued annually. TDS Certificate in Form No 16 has two parts viz. Part A and Part B (Annexure). Part A contains details of tax deduction and deposit and Part B (Annexure) contains details of income.

Vide Central Board of Direct Taxes Notification No. 36/2019 dated 12.04.2019, 'Part B (Annexure) of Form 16' and 'Annexure II of Form no. 24Q' in Appendix II to the Income tax Rules, 1962 have been amended.

In exercise of the powers delegated by the Central Board of Direct Taxes, under rule 31(6A), the Principal Director General of Income-tax (Systems) hereby specifies the procedure, formats and standards for the purposes of generation and download of certificates from "TDS Reconciliation Analysis and Correction Enabling System" or (https://www.tdscpc.gov.in) (hereinafter called TRACES Portal), as below:

- All deductors (including Government deductors) shall be able to issue the TDS certificate in Part B of Form No. 16 (by generation and download through TRACES Portal) in respect of all sums deducted on or after 01-04-2018 under the provisions of sec. 192 provided that the relevant TDS statement for the 4thquarter i.e. Form 24Q is furnished alongwith duly filled in Annexure II of Form 24Q (as substituted).

- To ensure generation of accurate TDS certificate in Part B of Form No. 16, the deductor(s) need to report correct data in Annexure II of Form 24Q.

- The TRACES generated Form No. 16 shall have a unique TDS certificate number.

- The deductor, issuing the TDS certificate in Form No. 16 by downloading it from the TRACES Portal, shall, before issuing to the deductee authenticate the correctness of contents mentioned therein and verify the same either by using manual signature or by using digital signature in accordance with rule 31(6).

- The item nos. 2(f) and 10(k) in Part B (Annexure) of Form 16 required to be filled-in by the deductor manually shall be made available at the bottom of the TRACES generated Form 16 (Part B) and the deductor shall duly fill details, where available, in item numbers 2(f) and 10(k) before furnishing of Part B (Annexure) to the employee.

- The deductors who opt to authenticate Part B of Form No. 16manually will be provided with the download of the Part B of Form No. 16 alongwith these item nos. 2(f) and 10(k) appearing at the bottom of the Form. The deductor shall duly fill details, where applicable, in item numbers 2(f) and 10(k) before furnishing of Part B (Annexure) to the employee.

- The deductors who opt to authenticate Part B of Form No. 16 using DSC will be provided with the download of Part B of Form No. 16 without item nos. 2(f) and 10(k) and therefore these details shall be required to be prepared by the employer and issued to the employee, where applicable, before furnishing of Part B to the employee.

M/s. Rolls Royce Defense Services, Inc notified u/s 10(6C) - Notification No. 39/2019 dated 10-05-2019

Specified income of M/s. Rolls Royce Defense Services, Inc by way of royalty or fees for technical services received in pursuance of specified agreement shall be exempted u/s 10(6C). MA

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STATUTORY UPDATES
INDIRECT TAXATION

Compiled by CA Shubham Khaitan

Utilization of ITC at the time of filing of return

✹ The newly inserted rule 88A in the CGST Rules allows utilization of input tax credit of Integrated tax towards the payment of Central tax and State tax, or as the case may be, Union territory tax, in any order and in any proportion subject to the condition that the entire input tax credit on account of Integrated tax is completely exhausted first before the input tax credit on account of Central tax or State / Union territory tax can be utilized. The following sequence/order has been clarified:

Input tax Credit on account of	Output liability on account of Integrated tax	Output liability on account of Central tax	Output liability on account of State tax / Union Territory tax
Integrated tax	(I)	(II) – In any order and in any proportion	
(III) Input tax Credit on account of Integrated tax to be completely exhausted mandatorily			
Central tax	(V)	(IV)	Not permitted
State tax / Union Territory tax	(VII)	Not permitted	(VI)

✹ Further it has been clarified that till the new order of utilization as per newly inserted Rule 88A of the CGST Rules is implemented on the common portal, taxpayers may continue to utilize their input tax credit as per the functionality available on the common portal.

(Circular No. 98/17/2019-GST dated 23rd April 2019)

Revocation of cancellation of registration

✹ A Removal of Difficulty Order (RoD) number 05/2019-Central Tax dated the 23rd April 2019 has been issued wherein persons whose registrations have been cancelled after they were served notice and who could not reply to the said notice and for whom cancellation order has been passed up to 31st March, 2019, have been given one time opportunity to apply for revocation of cancellation of registration on or before the 22nd July, 2019

✹ The situations warranting cancellation may have been any of the following:

(a) a registered person has contravened such provisions of the Act or the rules made thereunder as may be prescribed; or

(b) a person paying tax under composition scheme has not furnished returns for three consecutive tax periods; or

(c) any registered person, other than a person specified in clause (b), has not furnished returns for a continuous period of six months; or

(d) any person who has taken voluntary registration has not commenced business within six months from the date of registration; or

registration has been obtained by means of fraud, willful misstatement or suppression of facts

(e) The communication of notice may have been sent by any of the following modes: (c) by sending a communication to his e-mail address provided at the time of registration or as amended from time to time; or

(d) by making it available on the common portal

✹ If the registration has been cancelled on account of failure of the registered person to furnish returns, no application for revocation of cancellation of registration shall be filed, unless such returns are furnished and any amount in terms of such returns is paid.

✹ Where the registration has been cancelled with effect from the date of order of cancellation of registration, all returns due till the date of such cancellation are required to be furnished before the application for revocation can be filed.

✹ All returns required to be furnished in respect of the period from the date of order of cancellation till the date of order of revocation of cancellation of registration have to be furnished within a period of thirty days from the date of the order of revocation

✹ Where the registration has been cancelled with retrospective effect, the common portal does not allow furnishing of returns after the effective date of cancellation. In such cases it was not possible to file the application for revocation of cancellation of registration. Therefore, a third proviso was added to sub-rule (1) of rule 23 of the said Rules enabling filing of application for revocation of cancellation of registration, subject to the condition that all returns relating to the period from the effective date of cancellation of registration till the date of order of revocation of cancellation of registration shall be filed within a period of thirty days from the date of order of such revocation of cancellation of registration.

Return not furnished from	Date of order of cancellation of registration	Cancellation of registration effective from	Date of filing of application for revocation of cancellation of registration as per RoD (to be filed on or before the 22nd July, 2019)	Returns to be furnished before filing the application for revocation of cancellation of registration	Date of order of revocation of cancellation of registration	Date of furnishing returns for period b/w date of order of cancellation of registration and date of revocation of cancellation of registration (to be filed within thirty days from the date of order of revocation of cancellation of registration)	Returns to be furnished within thirty days from date of order of revocation of cancellation of registration
July, 18	01st March, 19	01st March, 19	30th May, 19	Returns due till 01st March, 19 (i.e. July, 18 to January, 19)	01st June, 19	01st July, 19	Returns due till 01st June, 19 (i.e. February, 19 to April, 19)
July, 18	22nd March, 19	22nd March, 19	20th June, 19	Returns due till 22nd March, 19 (i.e. July, 18 to February, 19)	22nd June,19	22nd July, 19	Returns due till 21st June, 19 (i.e. March, 19 to May, 19)
July, 18	01st March, 19	01st July, 18	30th May, 19	NA	01st June,19	01st July, 19	Returns due till 01st June, 19 (i.e. July, 18 to April, 19)

(Removal of Difficulty Order (RoD) number 05/2019-Central Tax dated the 23rd April 2019)
(Circular No. 99/18/2019-GST dt 23rd April, 2019)

GST Applicability on seed certification tags

Seed testing and certification is a multi-stage process, the charges for which are collected from the seed producers at different stages. Supply of seed tags to the seed producer is nothing but an element of the one integrated supply of seed testing and certification. All the charges, including those for issue of seed certificates/tags by the Seed Certification Agency of Tamil Nadu and Uttarakhand to the seed producing organization/ companies are collected for the composite supply of seed testing and certification, which is exempt under Notification No. 12/2017-Central Tax (Rate) Sl. No. 47 (services by Central/State Governments by way of testing/certification relating to safety of consumers and public at large, required under any law). This clarification would apply to supply of seed tags by seed testing and certification agencies of other states also following similar seed testing and certification procedure.

However, the State Governments/Seed Certification Agencies may get the tags used in seed certification printed from other departments/ manufacturers outside. Supply of seed tags by the other departments/manufacturers to the State Government/Seed Certification Agencies is a supply of goods liable to tax. Whether such tags would be classified under Chapter 49 as tags made of paper or in Textile chapters as tags made of textile would depend upon the predominant material used in the tags.

(Circular No. 100/19/2019- GST dt 30th April, 2019)

GST Exemption on upfront amount payable in instalments for long term lease of plots

GST exemption on the upfront amount (called as premium, salami, cost, price, development charges or by any other name) payable for long term lease (of thirty years, or more) of industrial plots or plots for development of infrastructure

for financial business under Entry No. 41 of Exemption Notification 12/2017 – Central Tax (R) dated 28.06.2017 is admissible irrespective of whether such upfront amount is payable or paid in one or more instalments, provided the amount is determined upfront.

(Circular No. 101/20/2019 – GST dt 30th April, 2019)

Extension of due date for furnishing Returns in Form GSTR 3B for the month of March 2019 for three days(i.e. from 20.04.19 to 23.04.19)

In exercise of the powers conferred by section 168 of the Central Goods and Services Tax Act, 2017 (12 of 2017) read with sub-rule (5) of rule 61 of the Central Goods and Services Tax Rules, 2017 (hereafter in this notification referred to as the said rules), the Commissioner, on the recommendations of the Council, hereby makes the further amendment in notification number 34/2018 – Central Tax, dated the 10th August, 2018. In the said notification provided that the return in FORM GSTR-3B of the said rules for the month of March, 2019 shall be furnished electronically through the common portal, on or before the 23rdApril, 2019.

(Notification No.19/2019- Central Tax dt 22nd April, 2019)

Quarterly tax payment and Annual return for the supplies covered under "Not. 2/2019"

- "New composition scheme" had been given vide Notification no. 2/2019-CT dated 7th March 2019 for certain category of suppliers having turnover upto Rs.50 lakhs subject to certain conditions.
- The said persons have now been required to submit details of payment of self assessed tax in FORM GST CMP-08 till the 18th day of the month succeeding such quarter
- The said will furnish their return annually in Form GSTR 4 on or before 30th April following the end of the financial year

(Notification No.21 /2019 – Central Tax dated 23rd April 2019)

Applicability date for restriction on generation of ewaybill for defaulters

- Persons who defaulted in furnishing of returns for two consecutive months (for normal tax payers) and two consecutive tax periods (for composition taxpayers) had been restricted from generation of e-waybill with certain conditions and exceptions.
- The said provision is said to be made applicable with effect from 21st June 2019.

(Notification No.22 /2019 – Central Tax dated 23rd April 2019)

Extension of due date for furnishing returns in form GSTR 1 for taxpayers having aggregate turnover more than Rs. 1.5 crore for the month of April 19 for registered persons in specified districts of Orissa till 10.06.2019

The details of outward supply of goods or services or both in FORM GSTR-1 of the Central Goods and Services Tax Rules, 2017 for the month of April, 2019 for registered persons whose principal place of business is in the districts of Angul, Balasore, Bhadrak , Cuttack , Dhenkanal , Ganjam, Jagatsinghpur, Jajpur, Kendrapara, Keonjhar, Khordha, Mayurbhanj, Nayagarh and Puri in the State of Odisha shall be furnished electronically through the common portal, on or before the 10th June, 2019.

(Notification No. 23/2019- Central Tax dt 11th May, 2019)

Extension of due date for furnishing returns in form GSTR 3B for the month of April 19 for registered persons in specified districts of Orissa till 20.06.2019

The return in FORM GSTR-3B of the Central Goods and Services Tax Rules, 2017 rules for the month of April, 2019 for registered persons whose principal place of business is in the districts of Angul, Balasore, Bhadrak , Cuttack , Dhenkanal , Ganjam, Jagatsinghpur, Jajpur, Kendrapara, Keonjhar, Khordha, Mayurbhanj, Nayagarh and Puri in the State of Odisha shall be furnished electronically through the common portal, on or before the 20th June, 2019.

(Notification No. 24/2019- Central Tax dt 11th May, 2019)

Extension of due date for opting the relevant scheme for real estate developers

The real estate developers for ongoing projects had an option to migrate to the new scheme i.e. 1%/5% tax without input tax credit or stay with the old scheme of 8%/12% with input tax credit. Such option had to be exercised by submitting Annexure IV with the jurisdictional Commissioner by 10th May 2019. Such time limit had been extended to 20th May 2019 vide the amendment.

(Notification no. 10/2019-Central tax (rate) dated 10th May 2019) MA

shubham@cakhaitan.com

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/CORR/09 Dated: 24th May, 2019

Elections to the Council & Regional Councils- 2019

Sub: LIST OF VOTERS OF EASTERN INDIA REGIONAL COUNCIL

The address of the following Polling Booth in alteration/addition of what have been published vide Notification No. EL-2019/12 dated 28th March, 2019 and in Ref.No:EL-2019/12/CORR/03 dated 23rd April, 2019 in the List of Voters, 2019 of Eastern India Regional Constituency should be read as indicated below:

The following booths stand dissolved and the voters from these booths are permitted to vote by post
B-081
B-092
B-098

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/CORR/07 Dated: 24th May, 2019

Elections to the Council & Regional Councils- 2019

Sub: LIST OF VOTERS OF NORTHERN INDIA REGIONAL COUNCIL

The address of the following Polling Booth in alteration/addition of what have been published vide Notification No. EL-2019/12 dated 28th March, 2019 and in Ref.No:EL-2019/12/CORR/02 dated 9th April, 2019 in the List of Voters, 2019 of Northern India Regional Constituency should be read as indicated below:

Polling Booth No.	**Alteration**
B-112	Allahabad Chapter of Cost Accountants of India Hall A and C, Kamla Market, First Floor, Stanley Road Awas Yojna, Stanley Road Allahabad – 211001.
B-135	Jagdish Bal Mandir Public School Shankar Vihar, Vikas Marg, Delhi – 110 092.
B-137	Andhra Education Society Senior Secondary School, Block B 3B, Janakpuri New Delhi – 110058.

The Polling Booth No.B-131 is dissolved and all the voters who are registered for this booth are permitted to vote from Polling Booth B-116.

The following booths stand dissolved and the voters from these booths are permitted to vote by post
B-113
B-114
B-115
B-124
B-140
B-143

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/CORR/08 Dated: 24th May, 2019

Elections to the Council & Regional Councils- 2019

Sub: LIST OF VOTERS OF SOUTHERN INDIA REGIONAL COUNCIL

The address of the following Polling Booth in alteration/addition of what have been published vide Notification No. EL-2019/12 and in Ref.No:EL-2019/12/CORR/04 dated 25th April, 2019 in the List of Voters, 2019 of Southern India Regional Constituency should be read as indicated below:

Polling Booth No.	**Additions**
B-043B	D.G. Vaishnav College 833, Gokul Bagh, Arumbakkam, Chennai-600106.

The following booths stand dissolved and the voters from these booths are permitted to vote by post
B-054
B-074

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/CORR/06 Dated: 24th May, 2019

Elections to the Council & Regional Councils- 2019

Sub: LIST OF VOTERS OF WESTERN INDIA REGIONAL COUNCIL

The address of the following Polling Booth in alteration/addition of what have been published vide Notification No. EL-2019/12 dated 28th March, 2019 and in Ref.No:EL-2019/12/CORR/05 dated 26th April, 2019 in the List of Voters, 2019 of Western India Regional Constituency should be read as indicated below:

Polling Booth No.	**Alteration**
B-021	Navi Mumbai Chapter of Cost Accountants of India K.B.Patil College Premises, Sector-15A, Vashi, Navi Mumbai – 400 703.

The following booths stand dissolved and the voters from these booths are permitted to vote by post
B-009
B-031

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

Eastern India Regional Constituency

The application of the following voters for voting by post / change of booth have been accepted and permitted to vote by post / in the changed booth as per the list given below:

Voter Srl. No	Changed Allocation
328	POST
4065	POST
2775	B-105A
1100	B-110
5057	B-100
163	B-099
1328	B-082
3556	B-099A
1517	B-110
838	POST
1123	B-088
1437	B-102
355	POST
33	B-082
2221	B-100
1900	B-082
2418	B-094
3078	B-099A
4488	B-107
63	B-104
2617	POST
2715	B-088
4909	POST
1525	B-110

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

1094	POST
1972	B-082
1226	B-082
4919	B-078
2878	POST
4706	B-082
4315	B-100
872	B-082
652	B-091
2769	B-090
1149	B-107
579	B-104
3485	B-099A
767	POST
2624	B-099A
1487	POST
50	B-083
901	B-100
1120	B-110
1514	B-110
851	POST
539	POST
2636	POST
521	POST
1086	B-087
1910	B-099
490	POST
4370	POST
324	B-079
1213	B-082
673	POST
820	POST
4862	POST
3627	POST
416	POST
3797	POST
3009	B-099A
1872	POST
658	POST
1170	POST

1516	B-110
302	POST
3107	B-102
480	B-099
133	POST
1047	B-105
4244	B-083
665	POST
3653	B-082
4885	B-082
396	POST
1059	POST
1098	B-082
187	POST
910	B-090
4880	POST
4541	B-078
474	POST
1201	POST
311	POST
2357	B-099A
1131	B-084
1099	B-082
4773	POST
1154	POST
1931	POST
4785	POST
542	POST
4670	B-082
4791	B-082
2021	POST
2209	POST
123	B-110
54	B-099
1202	POST
1868	POST
4724	POST

819	POST
749	B-109
442	B-106
4797	B-107
4617	B-104
242	POST
103	B-100
620	B-080
1521	B-110
4165	POST
936	POST
2740	POST
1945	B-082
121	B-082
1877	POST
1867	B-082
383	POST
1056	B-079
3316	B-090
4481	B-090
1177	B-082
306	POST
2901	B-100
1731	B-083
562	POST
1870	POST
2860	B-100
4345	B-082
645	B-108
4350	B-082
600	POST
1744	POST
4767	B-082
1524	POST
4369	POST
1178	B-082
546	POST

The Institute of Cost Accountants of India
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CMA Bhawan
12, Sudder Street, Kolkata – 700016.

1983	B-099A
1716	B-082
1965	POST
146	POST
156	B-095
1468	POST
1013	POST
899	B-106
131	POST
3824	B-099A
4798	B-087
2644	POST
1118	POST
319	POST
829	B-079
225	B-083
4074	POST
1738	POST
4460	B-082
1121	B-078
2	POST
1523	B-104
4359	POST
145	POST
212	POST
32	B-082
1938	B-082
903	POST
1880	POST
843	B-109
817	B-080
1936	POST
107	B-102
1095	POST
893	POST
707	POST
316	POST
621	POST

464	POST
119	POST
148	POST
2261	B-082
202	B-082
349	POST
4249	B-108
4356	B-082
591	POST
4668	POST
317	B-082
241	POST
794	POST
920	B-082
1733	POST
323	POST
1875	POST
4578	POST
151	POST
132	POST
2830	B-099
1083	B-082
1736	B-082
315	POST
189	POST
560	POST
1879	B-082
1944	POST
1143	B-096
1941	POST
4371	B-083
309	B-082
1740	B-083
1937	B-083
1014	POST
3987	POST
1114	B-099
1192	POST
1721	POST

369	POST
1859	POST
4890	B-082
1526	POST
1578	POST
1732	B-100
1734	B-099
722	POST
1071	POST
1953	B-082
1079	B-082
1940	B-082
1929	B-082
1848	B-082
1932	POST
72	POST

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

EASTERN INDIA REGIONAL CONSTITUTENCY

In pursuance of sub-rule 6 of Rule 6 of the Cost and Works (Elections to the Council) Rules, 2006, further to the List of Voters for the Elections to the Council & Regional Councils, 2019 published vide Notification No.EL-2019/12, dated 28thMarch, 2019 and in Ref.No:EL-2019/12/CORR/03 dated 23rd April, 2019, the following changes in the Booth Numbers already allotted have been made on the basis of information / particulars subsequently made available:

Against the voters allotted under Pin Code:	New Booth Allotted
700001	B-099A
700105	B-099
700038	B-105
700063	B-105
700104	B-105
700082	B-105

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 13, 2019

NOTIFICATION

No.: EL-2019/18(E): In accordance with the provisions of sub-rules (1) and (2) of Rule 15 of the Cost and Works Accountants (Election to the Council) Rules, 2006, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, a copy each of the Final Lists of Candidates for election to the Twentieth Election to the Council and Regional Councils (2019-23) of the Institute of Cost Accountants of India are given below:

List of Final List of Candidates for Election to the Council and Regional Councils – 2019.

EASTERN INDIA REGIONAL CONSTITUENCY - COUNCIL

1 **Basu, Biswarup**
35A, B. L. Saha Road,
2nd Floor, PO: New Alipore
KOLKATA – 700053

2 **Bhattacharjee, Shyamal Kumar**
8/4, S.P. Mukherjee Road,
DURGAPUR - 713204

3 **Chattopadhyay, Chittaranjan**
86/C, G.T. Road (Sirishtala),
SERAMPORE – 712201

4 **Das Chowdhury, Rinku**
11/43B, Panditia Road,
KOLKATA - 700029

5 **Das, Chiranjib**
Dakshinpara Purbaputiary,
Near Nabin Sathi Club,
Kathpole
KOLKATA - 700093

6 **Mishra, Niranjan**
Niran & Co.,
Esen Den
475, Asiana Plaza Entry,
Aiginia, Khandagiri,
BHUBANESWAR - 751019

7 **Mukhopadhyay, Bibekananda**
3 E, Aparupa Appartment
2 No. G B Dutta Road
Sodepur
KOLKATA – 700110

8 **Mukhopadhyay, Dinabandhu**
Professor
SMVD University
18A, Chandra Kumar Roy Lane,
First Floor,
KOLKATA – 700036

9 **Prasad, Bidyadhar**
Partner
Prasad Bhusan and Associates
351/A
Road No. 05
Ashok Nagar
RANCHI – 834002

10 **Sonthalia, Shyam Sundar**
S. S. Sonthalia & Co.,
Plot No. 395/4688 & 172/4689
Padmavati Vihar
P.O. Shailashri Vihar,
BHUBANESWAR – 751021

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

EASTERN INDIA REGIONAL CONSTITUENCY – REGIONAL COUNCIL

1 **Banerjee, Ashis**
A. Banerjee & Associates,
Kalitala Road,
Dist: Hooghly,
BARA BAHERA – 712246

2 **Basu, Arundhati**
A. Basu & Co.
FE-130, Sector - 3
Salt Lake
KOLKATA - 700106

3 **Bhattacharya, Pallab**
37, Gobindo Bose Lane
KOLKATA – 700025

4 **Chatterjee, Sandip**
24, Park Street,
Kolkata-700016.

5 **Dutta, Abhijit**
Auditor
A. Roy & Associates
36/5, P. Majumdar Road
Sadhur Bagan, P. O. Haltu
KOLKATA – 700078

6 **Ghosh, Sanjiban**
"JNG House" Plot No. 1221/07
Sabalpur Lower Road
Near Shiv Mandir
P.o. - K. G. Ashram. Govindpur
DHANBAD - 828109

7 **Mishra, Damodara**
Asst. General Manager(Finance)
Odisha Power Transmission Corporation Limited
Janapath , Bhoi Nagar
Finance Wing , Room No- 19
D. D. O. (Hqrs.)
BHUBANESWAR - 751022

8 **Nayak, Bibhuti Bhushan**
DGM(F),
GRIDCO
Janpath, Bhubaneswar,
BHUBANESWAR – 751022

9 **Nayak, Sanjit Kumar**
Dy General Manager (F & A)
SAIL, IISCO Steel Plant
Finance & Accounts Department
BURNPUR – 713325

10 **Nayak, Uttam Kumar**
Cost Accountant
Uttam Nayak & Co.
Plot No. 248/A, Aerodrome Gate Area,
BHUBANESWAR – 751020

11 **Patwari, Deepak Kumar**
South City Residential Complex,
375, Prince Anwar Shah Road,
Tower - 3, Floor - 27th, Flat - I,
KOLKATA – 700068

12 **Ramana, Cheruvu Venkata**
C/o. Hotel Jyoti Residency
Opp. Old Bus Stand
Dist: Ganjam
BERHAMPUR - 760001

13 **Samanta, Ashok Kumar**
43/7, Bholanath Nandy Lane,
SANTRAGACHI – 711104

14 **Singh, Abhishek Kumar**
India Government Mint
Shiv Niwas Lalit Vihar Colony
Po Nagnagar, Ism Sub Post Office
DHANBAD – 826004

15 **Singh, Nishant Kumar**
Practising Cost Accountant
Nishant & Co.
Neela Complex, Second Floor, Rewa Road
Near Bhagwanpur Electric Office,
Bhagwanpur Chowk, Bhagwanpur
MUZAFFARPUR – 842001

16 **Sinha, Rakesh Kumar**
R.K. Sinha & Co.
Sector I/C, Qr. No. 1206
BOKARO STEEL CITY - 827001

(L.Gurumurthy)
Returning officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 13, 2019

NOTIFICATION

No.: EL-2019/18(N): In accordance with the provisions of sub-rules (1) and (2) of Rule 15 of the Cost and Works Accountants (Election to the Council) Rules, 2006, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, a copy each of the Final Lists of Candidates for election to the Twentieth Election to the Council and Regional Councils (2019-23) of the Institute of Cost Accountants of India are given below:

List of Final List of Candidates for Election to the Council and Regional Councils – 2019.

NORTHERN INDIA REGIONAL CONSTITUENCY - COUNCIL

1 **Bhalla, Rakesh**
4551-C, Sector 70,
S.A.S. Nagar,
MOHALI – 160059

2 **Bhatt, Sandeep Kumar**
S.K. Bhatt & Associates
83B, Pocket-IV, Mayur Vihar Ph-I,
New Delhi-110091.

3 **Budhiraja, Jugal Kishore**
House No. F - 1084 (F F)
Chittaranjan Park (C R Park)
NEW DELHI – 110019

4 **Choudhary, Rakesh**
Chartered Accountant – Proprietor
Rakesh Choudhary & Associates
Stc-1/804, Sun Tower, Shipra Sun City Ph- II, plot No.10, Vaibhav Khand, Indirapuram
GHAZIABAD – 201014

5 **Gupta, Suresh Kumar**
General Manager (F & A)
The Haryana State Co-op Supply. & Mktg. Fed. Ltd.
Sector - 5,
PANCHKULA – 134109

6 **Jain, Baboo Lal**
J-602, Pioneer Park,
Sector-61,
Gurugram-122001.

7 **Jain, Navneet Kumar**
2-D, OCS Apartments,
Mayur Vihar, Phase - I Extn.,
NEW DELHI – 110091

8 **Sharma, Vijender**
Vijender Sharma & Associates
11, 3rd Floor
Hargovind Enclave
Vikas Marg
DELHI – 110092

9 **Singh, Balwinder**
F-125, Phase VIII-B,
Indl Area, Sector - 74,
Mohali,
CHANDIGARH - 160071

10 **Singh, Sunil Kumar**
SSCO Tower,
D-2/28, Vibhuti Khand,
Gomti Nagar,
Lucknow- 226010

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 13, 2019

NOTIFICATION

No.: EL-2019/18(N): In accordance with the provisions of sub-rules (1) and (2) of Rule 15 of the Cost and Works Accountants (Election to the Council) Rules, 2006, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, a copy each of the Final Lists of Candidates for election to the Twentieth Election to the Council and Regional Councils (2019-23) of the Institute of Cost Accountants of India are given below:

List of Final List of Candidates for Election to the Council and Regional Councils – 2019.

NORTHERN INDIA REGIONAL CONSTITUENCY – REGIONAL COUNCIL

1 **Bhati, Rajendra Singh**
1st Floor, Plot No. 42
Hari Om Tower
Manji Ka Hata, Paota
JODHPUR – 342001

2 **Goel, Sandeep**
Sandeep Goel & Co.
410, Pratap Bhawan
5, Bahadur Shah Zafar Marg
NEW DELHI - 110002

3 **Gupta, Mukesh Kumar**
F-125, Phase-VIII-B,
Indl Area, Sector 74,
Mohali,
Chandigarh – 160071

4 **Gupta, Yogesh Kumar**
D-1050, New Friends Colony,
New Delhi – 110025

5 **Handa, Musarrat Rai**
M. R. Handa & Co.,
1294, Sector - 9,
Faridabad – 121006

6 **Jagdeep**
House No. 7/1,
V. P. O, Qutab Garh Extention
New Delhi - 110039

7 **Jaiswal, Pawan**
Pawan Jaiswal & Associates
Sangam Place,
U-20 & 26, Civil Lines
ALLAHABAD – 211001

8 **Jat, Parash Ram**
12, D. K. Nagar,
Khatipura Road,
Jhotwara,
Jaipur - 302012

9 **Kandpal, Manish**
PCA
MM & Associates
10(D), Sector-7, Pocket-1, Dwarka
New Delhi - 110075

10 **Kumar, Sandeep**
96 A / 9, Shalom Apartment,
Block - A, Flat No. 9,
Kishangarh, Vasant Kunj
Delhi – 110070

11 **Kumar, Vijay**
General Manager
Airports Authority Of India
Rajiv Gandhi Bhawan Safdarjung Airport,
New Delhi 110003

12 **Malpani, Deepak**
Deepak Malpani & Associates
House No. 186A, Sector 11D,
Faridabad – 121006

13 **Mittal, Naveen**
Accounts and Finance Manager
M/s. Khyber Agro Farms Private Limited
1st Floor SDPS Building Goni Khan
Srinagar – 190001

14 **Mittal, Satya Narayan**
S N Mittal & Co.
16/60 Krishna Nagar,
(Rangbari) Main Road
KOTA – 324005

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

15 **Paliwal, Shailendra Kumar**
5/474, Viram Khand,
Gomti Nagar,
Lucknow – 226010

16 **Pant, Santosh**
Proprietor
Pant S & Associates
312, Nipun Plaza, Vaishali Sec-4
Ghaziabad – 201010

17 **Prasad, Deepika Bhugra**
202, Samrat Ashok Enclave,
Plot 6, Sector-18A,
Dwarka,
New Delhi -110075

18 **Sabharwal, Anika**
Cost Accountant
Anika Sabharwal & Associates,
8900 / 14 -B, East Park Road,
Karol Bagh
New Delhi – 110005

19 **Satpal, Honey**
Plot No. 17 - 18,
Opp : Allahbad Bank,
Sandeep Motor Street,
Damami Colony,
Jodhpur – 342003

20 **Sharma, Anil**
Propietor
Anil Sharma & Co
H. No. ,142
Sector - 23 A
Chandigarh – 160023

21 **Singh, Manoj Kumar**
Partner
Mars & Associates
10 / 203, 2nd Floor, Sikka Complex
Community Center
Preet Vihar
Delhi – 110092

22 **Tara, Harkesh**
H. Tara & Co.,
A-1-B/49-B,
Paschim Vihar,
NEW DELHI – 110063

23 **Thapliyal, Vinod Kumar**
Proprietor
Thapliyal & Associates
205/I, Phase-I
Vasant Vihar, P.O. New Forest
Near Lovely Market, Kanwali Road,
Dehra Dun – 248006

24 **Tiwari, Upendra**
Proprietor
U Tiwari & Associates
G-2503, The Jewel of Noida Dasnac
Plot No.14, Sector-75,
ECO City Noida
Near Sector 50 Metro Station
Noida – 201301

25 **Tiwary, Pawan Kumar**
Pawan Tiwary & Co.
L - 4/166, Vinay Khand,
Gomti Nagar,
Lucknow – 226010

26 **Wadhwa, Sankalp**
Leader Costing
Chandra Wadhwa & Co
204 & 204A, Krishna House
4805 / 24, Bharat Ram Road
Daryaganj
New Delhi – 110002

27 **Yadav, Prahalad Sahai**
Vill. - Loharwara
Teh. - Chomu
Dist.- Jaipur
Chomu – 303807

28 **Yadav, Rakesh**
72/240, Vinayak Path,
Near Patel Marg,
Manshrovar,
Jaipur-302020.

(L.Gurumurthy)
Returning officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 13, 2019

NOTIFICATION

No.: EL-2019/18(S): In accordance with the provisions of sub-rules (1) and (2) of Rule 15 of the Cost and Works Accountants (Election to the Council) Rules, 2006, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, a copy each of the Final Lists of Candidates for election to the Twentieth Election to the Council and Regional Councils (2019-23) of the Institute of Cost Accountants of India are given below:

List of Final List of Candidates for Election to the Council and Regional Councils – 2019.

SOUTHERN INDIA REGIONAL CONSTITUENCY-COUNCIL

1 **Annamraju, Venkatanarsimha Satya Nageswararao**
A.V.N.S.N.R. & Co.
30-1569/2 (Plot 35),
Anantanagar Colony, Neredmet,
P.O. R.K. Puram,
SECUNDERABAD – 500056

2 **Ashok, Iyya Nadar**
4, Madurai Road,
Near Periyar Statue
Tirumangalam,
MADURAI – 625706

3 **Govindarajan M**
Ayyan Illam, 55, Rajaram Street,
Jawahar Nagar,
Tirumangalam-625706,
Madurai Dist., T.N.

4 **Gunjalli, Suresh Rachappa**
No 10, 1st Floor
Vinayak Apartment
Vinayak Layout
Basaveshwara Nagar
BANGALORE – 560079

5 **Iyer, P Raju**
17, (Old No. 8),
Hasthinapuram Main Road,
Nehru Nagar, Chromepet,
CHENNAI – 600044

6 **Kalavalapalli, Sanyasi Rao**
Flat No.440,
Abhiram Blue Heavens
Gallavani Palem
Aganampudi
VISAKHAPATNAM – 530046

7 **Murali, V**
Partner
Victor Grace & Co.
Spencer Plaza, D-704,
7th Floor, Phase-1, 769,
Anna Salai, Mount Road,
CHENNAI – 600002

8 **Murthy, K Ch A V S N**
8-3-976/29,
Salivahane Nagar,
HYDERABAD – 500073

9 **Padmanabhan, H**
Sr. Manager
Indian Overseas Bank
Sr. Deputy General Secretary
Indian Overseas Bank Officers Association
763, Anna Salai
CHENNAI – 600002

10 **Srinivasa Prasad, T C A**
F-606, Arun Apartments,
Bazar Ghat, Red Hills,
HYDERABAD – 500004

11 **Sunkara, Paparao**
40-7-31, Mogalrajpuram,
VIJAYAWADA – 520010

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

SOUTHERN INDIA REGIONAL CONSTITUENCY-REGIONAL COUNCIL

1 **Agastya, Vijay Kiran**
Associates Vice President
Deloitte
Building No. 9
Opp. Westin
Raheja Mhidspace
HYDERABAD – 500081

2 **Anegundi, Yankappa H**
Anegundi & Co.
No. 130, Sainagar
Phase - I
Post: Vidyaranyapura
BANGALORE - 560097

3 **Badrinath, Attuluri Ramavenkata**
Senior Manager Finance
Indian Oil Corporation Ltd.
Marketing Division
3-6-436 to 438, 3rd Floor
Naspur House, Himayatnagar
HYDERABAD – 500029

4 **Bhat, Vishwanath Ramakrishna**
Vishwanath Bhat & Co.
NO.31, 2nd Floor, Rear Block, Opp Karanji
Anjaneya Temple, West Anajaneya Temple Street,
Basavanagudi
BANGALORE - 560004

5 **Chandra, Sekhar Rajanala**
Plot No.288/289,
AlladaSuvarna Leela Enclave,
Flat G-4, Sardarpatel Nagar,
Hyderabad – 500085.

6 **Darapaneni, Munisekhar**
6-3-349/15/17, Flat No :301
Sai Brundavan Apts, Behind Sai Baba Temple
Dwarakapuri Colony, Panjagutta
HYDERABAD - 500082

7 **Dwibedy, Pranabandhu**
P. Dwibedy & Co.
No. 16, Gokulum, 2nd Cross, Ayyappanagar,
Jalahalli West,
BANGALORE - 560015

8 **Garlapati, Shivannarayana**
Proprietor
Shivan & Co.,
#22 , F 405, 1st Cross, I Main, I Block,
Near Sai Mandir, Thyagarajanagar,
Cauvery's Kanaka Residency,
BANGALORE – 560028

9 **Iyer, Rajesh Sai**
25/13, Madhuban,
Ritherdon Road,
CHENNAI - 600007

10 **Kambadaraya, Girish**
36, Chatura Homes, 2nd Main,
Meenakshinagar,
Near Krishna Kalyana Mantapa,
Basaveshwaranagar,
BANGALORE – 560079

11 **Narayanan, Krish**
K. Narayanan & Associates
10, Thandavarayan Street
Triplicane
CHENNAI – 600005

12 **Narayanan, Padmavathi**
23/7, S. S. Sahib Street
Aminjikarai
CHENNAI – 600029

13 **Panamoottil, Pramode Chandran Gangadharan**
Proprietor
Pramode & Associates
TC-25/3155 (1), MRRA - A3,
Malloor Road,
Vanchiyoor - Post,
THIRUVANANTHAPURAM – 695035

14 **Panicker, Sankar P**
Panicker & Co.
64/768, Jaikunj
Chittoor Road
KOCHI – 682035

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

15 **Prakash, Uppalapati**
Uppalapati & Associates,
Flat No. G-5, Rameja Enclave,
Sector - 4, MVP Colony,
VISAKHAPATNAM – 530017

16 **Rajagopal, K**
Proprietor
Bharat Heavy Electricals Limited
4/1,
Thippiranthotti Street
TRICHY – 620008

17 **Rao, K Pandu Ranga**
Plot No. 70
D. No. 59A-8/4-6A
Sri Vasavinagar Colony
Polytechnic Post Office
VIJAYAWADA – 520008

18 **Satish, Jyothi**
No. 5, Thames Pacific City,
Akshaya Homes,
62, Guruswamy Road
Nolumbur, Madhuravoyal
CHENNAI – 600095

19 **Srinivasa Rao, Yadlapalli**
H. No. 16 - 3 - 1323
Haranadhapuram
2nd Lane
Nagasai Mandiram Road
NELLORE – 524002

20 **Suryanarayanan, K**
Flat `A`, Brindhavan Apartments,
Ground Floor, No. 1, Poes Road,
4th Street,
Teynampet,
CHENNAI – 600018

21 **Warrier, Rakhesh Ramankutty**
39/3030, "Parijat"
Valanjambalam,
Ravipuram Road,
KOCHI – 682016

(L.Gurumurthy)
Returning officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 13, 2019

NOTIFICATION

No.: EL-2019/18(W): In accordance with the provisions of sub-rules (1) and (2) of Rule 15 of the Cost and Works Accountants (Election to the Council) Rules, 2006, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, a copy each of the Final Lists of Candidates for election to the Twentieth Election to the Council and Regional Councils (2019-23) of the Institute of Cost Accountants of India are given below:

List of Final List of Candidates for Election to the Council and Regional Councils – 2019.

WESTERN INDIA REGIONAL CONSTITUENCY-COUNCIL

1 **Adukia, Rajkumar Satyanarayan**
Office No. 3-6, Bldg. No. 1
Meridian Apartments,
Ground Floor, Veera Desai Road,
Andheri (W),
MUMBAI – 400058

2 **Birla, Dinesh Kumar**
A/3, Nirant Appartment,
Opp: Townhall (River Side),
Near Karnavati Hospital, Ellis-Bridge,
AHMEDABAD – 380006

3 **Dalwadi, Ashwinkumar Gordhanbhai**
A. G. Dalwadi & Co.,
403, Ashirvad Complex, Next to `Aditya` Bldg.,
Behind Sardar Patel Seva Samaj,
Nr. Mithakhali Six Roads,
AHMEDABAD – 380006

4 **Joshi, Neeraj Dhananjay**
`CMA Pride, 1st Floor, Plot No. 6,
S. No. 16/6, Erandawana Hsg. Soc.
Erandawana,
PUNE – 411004

5 **Lokegaonkar, Haresh Anant**
11, Hari Vallabh
2nd Floor, J K Mehta Road
Santacruz (W),
MUMBAI – 400054

6 **Mitra, Debasish**
General Manager (Finance)
Konkan Railway Corporation Ltd.
Belapur Bhavan, Sector-11, C.B.D. Belapur,
Navi Mumbai – 400614.

7 **Narasimhan, Srinivasan G**
JER Mension, 70, August Kranti Marg,
Grant Roadm,
Mumbai – 400 036.

8 **Paliwal, Ghanshyam Rajaram**
G. R. Paliwal & Co.,
408A, Lokmat Bhawan,
Ramdaspath, Wardha Road,
NAGPUR – 440012

9 **Pawar, Laxman Digambar**
Cost Accountants
Pawar & Associates
16, Bhakti Complex, Mumbai-Pune Road
Behind Dr. Ambedkar Statue, 1st Floor
Pimpri
PUNE – 411018

10 **Thatte, Ashish Prakash**
504, Juniper Everest World,
Kolshet Road, Near Dhohali Naha,
THANE (WEST) – 400607

11 **Vora, Rohit Jamnadas**
1103, Raj Sunflower,
Royal Complex, Eksar Road,
Borivali (West),
MUMBAI – 400092

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

WESTERN INDIA REGIONAL CONSTITUENCY-REGIONAL COUNCIL

1 **Anikhindi, Anil Gunderao**
Proprietor
A. G. Anikhindi & Co
1730, Rajarampuri 6th Lane,
Dr. Parandekar Building
KOLHAPUR - 416008

2 **Bhavsar , Ashishkumar Sureshchandra**
Pratner
Ashish Bhavsar & Asscoiates
916, Shiromani Complex,
S. M. Road, Opp. Ocean Park,
Nehrunagar, Satellite Road,
AHMEDABAD - 380015

3 **Bhombe, Mahendra Tulshiram**
Flat No:16 3rd Floor,
Sai Namdev Park,
Part 1B, CTS No 5595 S. No:151,
Behind City International,morwadi, Pimpri School
PUNE – 411018

4 **Birla, Dinesh Kumar**
A/3, Nirant Appartment,
Opp: Townhall (River Side),
Near Karnavati Hospital, Ellis-Bridge,
AHMEDABAD - 380006

5 **Chourasia, Yogesh**
R-73, Zone II
Maharana Pratap Nagar
Near Arya Bhawan
BHOPAL – 462011

6 **Deshpande, Harshad S**
Proprietor
Harshad S Deshpande & Associates
1254, Sadashiv Peth
Sadbhav Sadanika
Near Nimbalkar Talim
PUNE - 411030

7 **Goswami, Arindam**
D-16, Bhawna Nagar
Khamardih
Shankar Nagar
RAIPUR - 492007

8 **Kaka, Mukeshkumar Bapulal**
C.F.O. & SENIOR CHIEF GENERAL MANAGER
.(FINANCE)
Gujarat Electricity Corporation Ltd.
Vidyutbhavan
Race Cource.
VADODARA - 390007

9 **Kulkarni, Vinayak Balkrishna**
18/603, Neelkanth CHSL.,
Nehru Nagar,
Kurla (East),
MUMBAI - 400024

10 **Kumar, Arun**
Chief Manager (Fin)
South Eastern Coalfields Ltd
Vigilance Department
Seepat Road
BILASPUR - 495006

11 **Mahankaliwar, Shriram Narayan**
Shriram & Co.,
A/15, NIT Complex,
Opp. Sudama Theatre,
Gokulpeth,
NAGPUR – 440010

12 **Mohrir, Chaitanya Laxmanrao**
507, "Kamdhenu Siddhi",
S No. 54 / 5, 54 / 6,
Lane No. 4, Mahatma Society,
Kothrud
PUNE - 411038

13 **Mundra, Satya Narayan**
V P Finance & Accounts
Kutch Chemical Industries Ltd.
H. No. - F2, Lenox Co-op. Hsg. Society
Nr. G I L Colony, G I D C.
ANKLESHWAR - 393002

14 **Rakshit, Samir**
Rakshit & Associates,
AT-Shraddhanjali, Netaji Chowk,
Pipe Factory Road, New Shantinagar,
P.O. Shankar Nagar,
RAIPUR – 492007

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

15 **Sapkal, Baliram Narayan**
Aasara Plot No.125, Sector-10,
Sanpada,
Navi Mumbai-400705.

16 **Savala, Nayana Premji**
Proprietor
N P S & Associates
1/101 A, Vishal Sushil Chs.
Nariman Road,
Vile Parle (E),
MUMBAI - 400057

17 **Shah, Akshay Pravin**
71/6, Savarkar Sadan,
Second Floor,
Dr. M.B. Raut Road,
Dadar,
MUMBAI – 400028

18 **Shahane, Amit Shantaram**
Flat No. 6, Plot No. 30, Tejaswi Soc.,
Tulshibagwale Colony,
Sahkarnagar No. 2,
PUNE - 411009

(L.Gurumurthy)
Returning Officer

ELECTIONS - 2019

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
(STATUTORY BODY UNDER AN ACT OF PARLIAMENT)
CMA BHAWAN
12, SUDDER STREET, KOLKATA-700 016.

Telephones : +91-33-2252-1031/1034/1035
+91-33-2252-1602/1492/1619
+91-33-2252-7143/7373/2204
Fax : +91-33-2252-7993
+91-33-2252-1026
+91-33-2252-1723
Website : www.icmai.in

May 3, 2019

NOTIFICATION

No. EL-2019/15(E): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, the names of persons whose nominations from **Eastern** India Regional Constituency for the next (Twentieth) Election to the Council of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Election to the Council – 2019

EASTERN INDIA REGIONAL CONSTITUENCY

1. **Basu, Biswarup**
35A, B. L. Saha Road,
2nd Floor, PO: New Alipore
KOLKATA - 700053

2 **Bhattacharjee, Shyamal Kumar**
8/4, S.P. Mukherjee Road,
DURGAPUR - 713204

3 **Chattopadhyay, Chittaranjan**
86/C, G.T. Road (Sirishtala),
SERAMPORE - 712201

4 **Das Chowdhury, Rinku**
11/43B, Panditia Road,
KOLKATA - 700029

5 **Das, Chiranjib**
Dakshinpara Purbaputiary,
Near Nabin Sathi Club,
Kathpole
KOLKATA - 700093

6 **Mishra, Niranjan**
Niran & Co.,
Esen Den
475, Asiana Plaza Entry,
Aiginia, Khandagiri,
BHUBANESWAR - 751019

7 **Mukhopadhyay, Bibekananda**
3 E, Aparupa Appartment
2 No. G B Dutta Road
Sodepur
KOLKATA - 700110

8 **Mukhopadhyay, Dinabandhu**
Professor
SMVD University
18A, Chandra Kumar Roy Lane,
First Floor,
KOLKATA - 700036

9 **Prasad, Bidyadhar**
Partner
Prasad Bhusan and Associates
351/A
Road No. 05
Ashok Nagar
RANCHI - 834002

10 **Sonthalia, Shyam Sundar**
S. S. Sonthalia & Co.,
Plot No. 395/4688 & 172/4689
Padmavati Vihar
P.O. Shailashri Vihar,
BHUBANESWAR - 751021

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

ELECTIONS - 2019

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
(STATUTORY BODY UNDER AN ACT OF PARLIAMENT)
CMA BHAWAN
12, SUDDER STREET, KOLKATA-700 016.

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+91-33-2252-7143/7373/2204
Fax : +91-33-2252-7993
+91-33-2252-1026
+91-33-2252-1723
Website : www.icmai.in

May 3, 2019

NOTIFICATION

No. EL-2019/15(N): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, the names of persons whose nominations from **Northern** India Regional Constituency for the next (Twentieth) Election to the Council of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Election to the Council – 2019

NORTHERN INDIA REGIONAL CONSTITUENCY

1. **Bhalla, Rakesh**
4551-C, Sector 70,
S.A.S. Nagar,
MOHALI - 160059

2 **Bhatt, Sandeep Kumar**
S.K. Bhatt & Associates
F-103, DAV Complex
Opp. Samachar Apartment
Mayur Vihar, Ph-1
NEW DELHI – 110091

3 **Budhiraja, Jugal Kishore**
House No. F - 1084 (F F)
Chittaranjan Park (C R Park)
NEW DELHI - 110019

4 **Choudhary, Rakesh**
Chartered Accountant - Proprietor
Rakesh Choudhary & Associates
Stc-1/804, Sun Tower, Shipra Sun City Ph- II,Plot No.10
Vaibhav Khand, Indirapuram
GHAZIABAD – 201014

5 **Gupta, Suresh Kumar**
General Manager (F & A)
The Haryana State Co-op Supp. & Mktg. Fed. Ltd.
Sector - 5,
PANCHKULA - 134109

6 **Jain, Baboo Lal**
General Manager (F&A)
MMTC Ltd.
Core I, SCOPE Complex,
Lodi Road,
NEW DELHI – 110003

7 **Jain, Navneet Kumar**
2-D, OCS Apartments,
Mayur Vihar, Phase - I Extn.,
NEW DELHI - 110091

8 **Sharma, Vijender**
Vijender Sharma & Associates
11, 3rd Floor
Hargovind Enclave
Vikas Marg
DELHI – 110092

9 **Singh, Balwinder**
F-125, Phase VIII-B,
Indl Area, Sector - 74,
Mohali,
CHANDIGARH - 160071

10 **Singh, Sunil Kumar**
SSCO Tower,
D-2/28, Vibhuti Khand,
Gomti Nagar,
LUCKNOW - 226010

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

ELECTIONS - 2019

THE INSTITUTE OF COST ACCOUNTANTS OF INDIA
(STATUTORY BODY UNDER AN ACT OF PARLIAMENT)
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Fax : +91-33-2252-7993
+91-33-2252-1026
+91-33-2252-1723
Website : www.icmai.in

May 3, 2019

NOTIFICATION

No. EL-2019/15(S): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, the names of persons whose nominations from **Southern** India Regional Constituency for the next (Twentieth) Election to the Council of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Election to the Council – 2019

SOUTHERN INDIA REGIONAL CONSTITUENCY

1. **Annamraju, Venkatanarsimha Satya Nageswararao**
A.V.N.S.N.R. & Co.
30-1569/2 (Plot 35),
Anantanagar Colony, Neredmet,
P.O. R.K. Puram,
SECUNDERABAD - 500056

2 **Ashok, Iyya Nadar**
4, Madurai Road,
Near Periyar Statue
Tirumangalam,
MADURAI - 625706

3 **Govindarajan M**
Sr. Accounts Officer
B S N L
O/o General Manager
Madurai Telecom District
C T M X 3rd Floor, C T O Compound
Tallakulam
MADURAI - 625002

4 **Gunjalli, Suresh Rachappa**
No 10, 1st Floor
Vinayak Apartment
Vinayak Layout
Basaveshwara Nagar
BANGALORE - 560079

5 **Iyer, P Raju**
17, (Old No. 8),
Hasthinapuram Main Road,
Nehru Nagar,
Chromepet,
CHENNAI - 600044

6 **Kalavalapalli, Sanyasi Rao**
Flat No.440,
Abhiram Blue Heavens
Gallavani Palem
Aganampudi
VISAKHAPATNAM - 530046

7 **Murali, V**
Partner
Victor Grace & Co.
Spencer Plaza, D-704,
7th Floor, Phase-1, 769,
Anna Salai,
Mount Road,
CHENNAI - 600002

8 **Murthy, K Ch A V S N**
8-3-976/29, Sailvahane Nagar,
HYDERABAD - 500073

9 **Padmanabhan, H**
Sr. Manager
Indian Overseas Bank
Sr. Deputy General Secretary
Indian Overseas Bank Officers Association
763, Anna Salai
CHENNAI - 600002

10 **Rao, Sunkara Papa**
40-7-31, Mogalrajpuram,
VIJAYAWADA - 520010

11 **Srinivasa Prasad, T C A**
F-606, Arun Apartments,
Bazar Ghat, Red Hills,
HYDERABAD - 500004

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

THE INSTITUTE OF
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Website : www.icmai.in

May 3, 2019

NOTIFICATION

No. EL-2019/15(W): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, the names of persons whose nominations from **Western** India Regional Constituency for the next (Twentieth) Election to the Council of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Election to the Council – 2019

WESTERN INDIA REGIONAL CONSTITUENCY

1. **Adukia, Rajkumar Satyanarayan**
Partner
Adukia & Associates
Office No. 3, Bldg. No. 1
Meridian Apartments,
Ground Floor, Veera Desai Road,
Andheri (W),
MUMBAI - 400058

2 **Birla, Dinesh Kumar**
A/3, Nirant Appartment,
Opp: Townhall (River Side),
Near Karnavati Hospital, Ellis-Bridge,
AHMEDABAD - 380006

3 **Dalwadi, Ashwinkumar Gordhanbhai**
A. G. Dalwadi & Co.,
403, Ashirvad Complex, Next to 'Aditya' Bldg.,
Behind Sardar Patel Seva Samaj,
Nr. Mithakhali Six Roads,
AHMEDABAD - 380006

4 **Joshi, Neeraj Dhananjay**
'CMA Pride, 1st Floor, Plot No. 6,
S. No. 16/6, Erandawana Hsg. Soc.
Erandawana,
PUNE - 411004

5 **Lokegaonkar, Haresh Anant**
11, Hari Vallabh
2nd Floor
J K Mehta Road
Santacruz (W),
MUMBAI - 400054

6 **Mitra, Debasish**
B/502, Mayuresh Srishty Park,
Off Lake Road,
Bhandup (W),
MUMBAI - 400078

7 **Narasimhan, Srinivasan G**
B-204, Runwal Pride,
Behind R Mall,
L B S Marg,
Mulund West,
MUMBAI - 400080

8 **Paliwal, Ghanshyam Rajaram**
G. R. Paliwal & Co.,
408A, Lokmat Bhawan,
Ramdaspath, Wardha Road,
NAGPUR - 440012

9 **Pawar, Laxman Digambar**
Cost Accountants
Pawar & Associates
16, Bhakti Complex
Mumbai-Pune Road
Behind Dr. Ambedkar Statue, 1st Floor
Pimpri
PUNE - 411018

10 **Thatte, Ashish Prakash**
504, Juniper Everest World,
Kolshet Road, Near Dhohali Naha,
THANE (WEST) - 400607

11 **Vora, Rohit Jamnadas**
1103, Raj Sunflower,
Royal Complex,
Eksar Road,
Borivali (West),
MUMBAI - 400092

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

ELECTIONS - 2019

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May 3, 2019

NOTIFICATION

No. EL-2019/16(E): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, the names of persons whose nominations from **Eastern** India Regional Constituency for the next Elections to the Regional Councils of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Elections to the Regional Council – 2019

EASTERN INDIA REGIONAL CONSTITUENCY

1. **Banerjee, Ashis**
A. Banerjee & Associates,
Kalitala Road,
Dist: Hooghly,
BARA BAHERA - 712246

2 **Basu, Arundhati**
A. Basu & Co.
FE-130, Sector - 3
Salt Lake
KOLKATA - 700106

3 **Bhattacharya, Pallab**
37, Gobindo Bose Lane
KOLKATA - 700025

4 **Chatterjee, Sandip**
252, Green Park
Sarada Pally
KOLKATA - 700055

5 **Dutta, Abhijit**
Auditor
A. Roy & Associates
36/5, P. Majumdar Road
Sadhur Bagan
P. O. Haltu
KOLKATA - 700078

6 **Ghosh, Sanjiban**
"JNG House" Plot No. 1221/07
Sabalpur Lower Road
Near Shiv Mandir
P.o. - K. G. Ashram. Govindpur
DHANBAD - 828109

7 **Mishra, Damodara**
Asst. General Manager(Finance)
Odisha Power Transmission Corporation Limited
Janapath ,
Bhoi Nagar
Finance Wing , Room No- 19
D. D. O. (Hqrs.)
BHUBANESWAR - 751022

8 **Nayak, Bibhuti Bhushan**
Agm (F), Central Internal
Odisha Power Transmision Corporation Ltd.
Odisha Power Transmision Corporation Ltd.
Janpath, Bhubaneswar
BHUBANESWAR - 751022

9 **Nayak, Sanjit Kumar**
Dy General Manager (F & A)
SAIL, IISCO Steel Plant
Finance & Accounts Department
BURNPUR - 713325

10 **Nayak, Uttam Kumar**
Cost Accountant
Uttam Nayak & Co.
Uttam Nayak & Co.
Plot No. 248/A,
Aerodrome Gate Area,
BHUBANESWAR - 751020

11 **Patwari, Deepak Kumar**
South City Residential Complex,
375, Prince Anwar Shah Road,
Tower - 3, Floor - 27th, Flat - I,
KOLKATA - 700068

12 **Ramana, Cheruvu Venkata**
C/o. Hotel Jyoti Residency
Opp. Old Bus Stand
Dist: Ganjam
BERHAMPUR - 760001

Contd....2/

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Fax : +91-33-2252-7993
+91-33-2252-1026
+91-33-2252-1723
Website : www.icmai.in

13 **Samanta, Ashok Kumar**
43/7, Bholanath Nandy Lane,
SANTRAGACHI - 711104

14 **Singh, Abhishek Kumar**
India Government Mint
Shiv Niwas Lalit Vihar Colony
Po Nagnagar
Ism Sub Post Office
DHANBAD - 826004

15 **Singh, Nishant Kumar**
Practising Cost Accountant
Nishant & Co.
Neela Complex, Second Floor, Rewa Road
Near Bhagwanpur Electric Office,
Bhagwanpur Chowk,
Bhagwanpur
MUZAFFARPUR - 842001

16 **Sinha, Rakesh Kumar**
R.K. Sinha & Co.
Sector I/C, Qr. No. 1206
BOKARO STEEL CITY - 827001

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

ELECTIONS - 2019

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May 3, 2019

NOTIFICATION

No. EL-2019/16(N): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, the names of persons whose nominations from **Northern** India Regional Constituency for the next Elections to the Regional Councils of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Elections to the Regional Council – 2019

NORTHERN INDIA REGIONAL CONSTITUENCY

1. **Bhati, Rajendra Singh**
1st Floor, Plot No. 42
Hari Om Tower
Manji Ka Hata, Paota
JODHPUR - 342001

2 **Goel, Sandeep**
Cost Accountant
Sandeep Goel & Co.
410, Pratap Bhawan
5, Bahadur Shah Zafar Marg
NEW DELHI - 110002

3 **Gupta, Mukesh Kumar**
F-125, Phase-VIII-B,
Indl Area, Sector 74,
Mohali,
CHANDIGARH - 160071

4 **Gupta, Yogesh Kumar**
D-1050, New Friends Colony,
NEW DELHI - 110025

5 **Handa, Musarrat Rai [*]**
M. R. Handa & Co.,
1294, Sector - 9,
FARIDABAD - 121006

6 **Jagdeep**
House No. 7/1,
V. P. O, Qutab Garh Extention
NEW DELHI - 110039

7 **Jaiswal, Pawan**
Pawan Jaiswal & Associates
Sangam Place,
U-20 & 26,
Civil Lines
ALLAHABAD - 211001

8 **Jat, Parash Ram**
12, D. K. Nagar,
Khatipura Road,
Jhotwara,
JAIPUR - 302012

9 **Kandpal, Manish**
PCA
MM & Associates
10D
Sector-7,
Pocket-1
Dwarka-75
NEW DELHI - 110075

10 **Kumar, Sandeep**
96 A / 9, Shalom Apartment,
Block - A, Flat No. 9,
Kishangarh, Vasant Kunj
DELHI - 110070

11 **Kumar, Vijay**
General Manager
Airports Authority Of India
,Rajiv Gandhi Bhawan Safdarjung Airport New
Delhi 110003
DELHI - 110003

12 **Malpani, Deepak**
Deepak Malpani & Associates
House No. 186A,
Sector 11D,
FARIDABAD - 121006

Against serial no. 5 [*] → Subject to submission of photograph by 10th May, 2019.

Contd....2/

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13 **Mittal, Naveen**
Accounts and Finance Manager
M/s. Khyber Agro Farms Private Limited
1st Floor Sdps Building Goni Khan
SRINAGAR - 190001

14 **Mittal, Satya Narayan**
Cost Accountant
S N Mittal & Co.
16/60 Krishna Nagar,
(Rangbari) Main Road
KOTA - 324005

15 **Paliwal, Shailendra Kumar**
5/474, Viram Khand,
Gomti Nagar,
LUCKNOW - 226010

16 **Pant, Santosh**
Proprietor
Pant S & Associates
312, Nipun Plaza
Vaishali Sec-4
SAHIBABAD - 201010

17 **Prasad, Deepika Bhugra**
E - 702, Nav Sanjeevan
Sector - 12, Plot No.1
Dwarka
DELHI - 110075

18 **Sabharwal, Anika**
Cost Accountant
Anika Sabharwal & Associates,
8900 / 14 -B, East Park Road,
Karol Bagh
NEW DELHI - 110005

19 **Satpal, Honey**
Plot No. 17 - 18,
Opp : Allahbad Bank,
Sandeep Motor Street,
Damami Colony,
JODHPUR - 342003

20 **Sharma, Anil**
Proprietor
Anil Sharma & Co
H. No. ,142
Sector - 23 A
CHANDIGARH - 160023

21 **Singh, Manoj Kumar**
Partner
Mars & Associates
10 / 203, 2nd Floor, Sikka Complex
Community Center
Preet Vihar
DELHI - 110092

22 **Tara, Harkesh**
H. Tara & Co.,
A-1-B/49-B,
Paschim Vihar,
NEW DELHI - 110063

23 **Thapliyal, Vinod Kumar**
Proprietor
Thapliyal & Associates
205/I, Phase-I
Vasant Vihar, P.O. New Forest
Near Lovely Market, Kanwali Road,
DEHRA DUN - 248006

24 **Tiwari, Upendra**
Proprietor
U Tiwari & Associates
G-2503, The Jewel of Noida Dasnac
Plot No.14, Sector-75,
ECO City Noida
Near Sector 50 Metro Station
GHAZIABAD - 201301

Contd....3/

ELECTIONS - 2019

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Fax : +91-33-2252-7993
+91-33-2252-1026
+91-33-2252-1723
Website : www.icmai.in

25 **Tiwary, Pawan Kumar**
Pawan Tiwary & Co.
L - 4/166, Vinay Khand,
Gomti Nagar,
LUCKNOW - 226010

26 **Wadhwa, Sankalp**
Leader Costing
Chandra Wadhwa & Co
204 & 204A, Krishna House
4805 / 24, Bharat Ram Road
Daryaganj
NEW DELHI - 110002

27 **Yadav, Prahalad Sahai**
Vill. - Loharwara
Teh. - Chomu
Dist.- Jaipur
CHOMU - 303807

28 **Yadav, Rakesh**
D - 67, Shiv Heera Path
Chomu House Circle
C - Scheme
JAIPUR - 302001

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

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May 3, 2019

NOTIFICATION

No. EL-2019/16(S): In pursuance of sub-rules (1) and (2) of Rule 13 of the Cost and Works Accountants (Election to the Council) Rules, 2006, as amended, read with Regulation 118 of the Cost and Works Accountants Regulations, 1959, the names of persons whose nominations from **Southern** India Regional Constituency for the next Elections to the Regional Councils of the Institute of Cost Accountants of India to be held on 28th June, 2019, have been accepted as valid, are hereby published for information of all concerned.

List of Valid Nominations for Elections to the Regional Council – 2019

SOUTHERN INDIA REGIONAL CONSTITUENCY

1. **Agastya, Vijay Kiran**
Associates Vice President
Deloitte
Building No. 9
Opp. Westin
Raheja Mhidspace
HYDERABAD - 500081

2 **Anegundi, Yankappa H**
Anegundi & Co.
No. 130, Sainagar
Phase - I
Post: Vidyaranyapura
BANGALORE - 560097

3 **Badrinath, Attuluri Ramavenkata**
Senior Manager Finance
Indian Oil Corporation Ltd.
Indian Oil Corporation Ltd.
Marketing Division
3-6-436 to 438, 3rd Floor
Naspur House, Himayatnagar
HYDERABAD - 500029

4 **Bhat, Vishwanath Ramakrishna**
Vishwanath Bhat & Co.
NO.31, 2nd Floor, Rear Block, Opp Karanji
Anjaneya Temple, West Anajaneya Temple
Street,
Basavanagudi
BANGALORE - 560004

5 **Darapaneni, Munisekhar**
6-3-349/15/17, Flat No :301
Sai Brundavan Apts, Behind Sai Baba Temple
Dwarakapuri Colony
Panjagutta
HYDERABAD - 500082

6 **Dwibedy, Pranabandhu**
P. Dwibedy & Co.
No. 16, Gokulum, 2nd Cross, Ayyappanagar,
Jalahalli West,
BANGALORE - 560015

7 **Garlapati, Shivannarayana**
Proprietor
Shivan & Co.,
#22 , F 405, 1st Cross, I Main, I Block,
Near Sai Mandir,
Thyagarajanagar,
Cauvery's Kanaka Residency,
BANGALORE - 560028

8 **Iyer, Rajesh Sai**
25/13, Madhuban,
Ritherdon Road,
CHENNAI - 600007

9 **Kambadaraya, Girish**
36, Chatura Homes, 2nd Main,
Meenakshinagar,
Near Krishna Kalyana Mantapa,
Basaveshwaranagar,
BANGALORE - 560079

10 **Narayanan, Krish**
K. Narayanan & Associates
10, Thandavarayan Street
Triplicane
CHENNAI - 600005

11 **Narayanan, Padmavathi**
23/7, S. S. Sahib Street
Aminjikarai
CHENNAI - 600029

12 **Panamoottil, Pramode Chandran Gangadharan**
Proprietor
Pramode & Associates
TC-25/3155 (1), MRRA - A3,
Malloor Road,
Vanchiyoor - Post,
THIRUVANANTHAPURAM - 695035

Contd....2/

ELECTIONS - 2019

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Website : www.icmai.in

13 **Panicker Sankar P**
Panicker & Co.
64/768, Jaikunj
Chittoor Road
KOCHI - 682035

14 **Prakash, Uppalapati**
Uppalapati & Associates,
Flat No. G-5, Rameja Enclave,
Sector - 4, MVP Colony,
VISAKHAPATNAM - 530017

15 **Rajagopal, K**
Properitor
Bharat Heavy Electricals Limited
4/1,
Thippiranthotti Street
TRICHY - 620008

16 **Rao, K Pandu Ranga**
Plot No. 70
D. No. 59A-8/4-6A
Sri Vasavinagar Colony
Polytechnic Post Office
VIJAYAWADA - 520008

17 **Satish, Jyothi**
No. 5, Thames Pacific City,
Akshaya Homes,
62, Guruswamy Road
Nolumbur, Madhuravoyal
CHENNAI - 600095

18 **Sekhar, Rajanala Chandra**
Plot No. 489, Bhagatsingh Nagar,
Near Vasanth Nagar, KPHB,
HYDERABAD - 500072

19 **Srinivasa Rao, Yadlapalli**
H. No. 16 - 3 - 1323
Haranadhapuram
2nd Lane
Nagasai Mandiram Road
NELLORE - 524002

20 **Suryanarayanan, K**
Flat 'A', Brindhavan Apartments,
Ground Floor, No. 1, Poes Road,
4th Street,
Teynampet,
CHENNAI - 600018

21 **Warrier, Rakhesh Ramankutty**
39/3030, "Parijat"
Valanjambalam,
Ravipuram Road,
KOCHI - 682016

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

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NOTIFICATION

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List of Valid Nominations for Elections to the Regional Council – 2019

WESTERN INDIA REGIONAL CONSTITUENCY

1. **Anikhindi, Anil Gunderao**
Proprietor
A. G. Anikhindi & Co
1730, Rajarampuri 6th Lane,
Dr. Parandekar Building
KOLHAPUR - 416008

2 **Bhombe, Mahendra Tulshiram**
Flat No:16 3rd Floor,
Sai Namdev Park,
Part 1B, CTS No 5595 S. No:151,
Behind City International,morwadi, Pimpri School
PUNE - 411018

3 **Birla, Dinesh Kumar**
A/3, Nirant Appartment,
Opp: Townhall (River Side),
Near Karnavati Hospital, Ellis-Bridge,
AHMEDABAD - 380006

4 **Chourasia, Yogesh**
R-73, Zone II
Maharana Pratap Nagar
Near Arya Bhawan
BHOPAL - 462011

5 **Deshpande, Harshad S**
Proprietor
Harshad S Deshpande & Associates
1254, Sadashiv Peth
Sadbhav Sadanika
Near Nimbalkar Talim
PUNE - 411030

6 **Goswami, Arindam**
D-16, Bhawna Nagar
Khamardih
Shankar Nagar
RAIPUR - 492007

7 **Kaka, Mukeshkumar Bapulal**
C.F.O. & SENIOR CHIEF GENERAL MANAGER
.(FINANCE)
Gujarat Electricity Corporation Ltd.
Vidyutbhavan
Race Cource.
VADODARA - 390007

8 **Kulkarni, Vinayak Balkrishna**
18/603, Neelkanth CHSL.,
Nehru Nagar,
Kurla (East),
MUMBAI - 400024

9 **Kumar, Arun**
Chief Manager (Fin)
South Eastern Coalfields Ltd
Vigilance Department
Seepat Road
BILASPUR - 495006

10 **Mahankalwar, Shriram Narayan**
Shriram & Co.,
A/15, NIT Complex,
Opp. Sudama Theatre,
Gokulpeth,
NAGPUR - 440010

11 **Mohrir, Chaitanya Laxmanrao**
507, "Kamdhenu Siddhi",
S No. 54 / 5, 54 / 6,
Lane No. 4, Mahatma Society,
Kothrud
PUNE - 411038

12 **Mundra, Satya Narayan**
V P Finance & Accounts
Kutch Chemical Industries Ltd.
H. No. - F2, Lenox Co-op. Hsg. Society
Nr. G I L Colony, G I D C.
ANKLESHWAR - 393002

Contd....2/

ELECTIONS - 2019

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+91-33-2252-1723
Website : www.icmai.in

13 **Rakshit, Samir**
Rakshit & Associates,
AT-Shraddhanjali, Netaji Chowk,
Pipe Factory Road, New Shantinagar,
P.O. Shankar Nagar,
RAIPUR - 492007

14 **Sapkal, Baliram Narayan**
Finance Department,
Lubrizol India Pvt. Ltd.,
9/3, Thane Belapur Road,
Turbhe,
NAVI MUMBAI - 400705

15 **Savala, Nayana Premji**
Proprietor
N P S & Associates
1/101 A, Vishal Sushil Chs.
Nariman Road,
Vile Parle (E),
MUMBAI - 400057

16 **Shah, Akshay Pravin**
71/6, Savarkar Sadan,
Second Floor,
Dr. M.B. Raut Road,
Dadar,
MUMBAI - 400028

17 **Shahane, Amit Shantaram**
Manager Accounts
Tata
Flat No. 6, Plot No. 30, Tejaswi Soc.,
Tulshibagwale Colony,
Sahkarnagar No. 2,
PUNE - 411009

18 **Sureshchandra, Bhavsar Ashishkumar**
Pratner
Ashish Bhavsar & Asscolates
916, Shiromani Complex,
S. M. Road, Opp. Ocean Park,
Nehrunagar,
Satellite Road,
AHMEDABAD - 380015

(L Gurumurthy)
Returning Officer

Copy to: All the above Candidates

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

NORTHERN INDIA REGIONAL CONSTITUTENCY

In pursuance of sub-rule 6 of Rule 6 of the Cost and Works (Elections to the Council) Rules, 2006, further to the List of Voters for the Elections to the Council & Regional Councils, 2019 published vide Notification No.EL-2019/12, dated 28thMarch, 2019 and in Ref.No:EL-2019/12/CORR/02 dated 9th April, 2019, the following changes in the Booth Numbers already allotted have been made on the basis of information / particulars subsequently made available:

Against the voters allotted under the town heading 'New Delhi' whose addresses fall under Pin Code:	**New Booth Allotted**
110025	B-134

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

Northern India Regional Constituency

The application of the following voters for voting by post / change of booth have been accepted and permitted to vote by post / in the changed booth as per the list given below:

Voter Srl. No	Changed Allocation
5106	POST
90	B-129
4509	B-132
4731	B-133
4770	B-132
1318	B-120
4803	B-138
2566	B-132
1931	POST
1999	B-125
4992	POST
2115	B-116
4311	B-122
147	POST
4346	B-132
4516	B-133
217	B-138
3291	B-128
371	B-132
45	POST
5625	POST

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2172	B-122
2152	B-120
1832	POST
5121	POST
4474	B-128
5500	B-132
609	B-122
5470	POST
1675	POST
363	POST
2504	POST
978	B-138
1257	POST
2350	B-121
5243	B-120
1893	POST
898	B-119
3750	B-132
2231	B-120
2486	B-130
2185	B-127
4	B-120
4314	B-121
4951	POST
4622	B-132
4792	B-120
5206	B-120
2015	B-132
1902	POST
954	POST
194	POST
1598	POST
1269	POST
4099	POST
3573	POST
239	POST
3960	POST

3054	B-116
3846	B-132
3393	B-120
1106	B-132
4752	B-136
3403	POST
2344	B-120
1711	POST
3079	B-133
1556	B-139
4147	B-120
179	POST
241	B-122
1621	POST
1784	B-136
5288	POST
182	POST
1693	POST
1432	B-138
3630	B-135
3065	B-120
5286	B-120
808	B-135
3814	POST
4566	B-132
107	POST
1859	POST
1858	POST

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India

(Statutory body under an Act of Parliament)

CMA Bhawan

12, Sudder Street, Kolkata – 700016.

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

13th May, 2019

NOTIFICATION

Presence of candidates and their authorised representatives at the polling booths

No. EL-2019/19: In pursuance of sub-rule(2) of Rule 26 of the Cost and Works Accountants (Election to the Council) Rules, 2006 as amended read with Regulation 118 of the Cost and Works Accountants Regulations, 1959 as amended, candidates wishing to appoint authorised representatives for Polling Booths are requested to send to the Returning Officer by name, so as to reach him not later than **28th May, 2019 upto 6.00 P.M.**, an intimation of their intention to appoint such authorised representatives, the number of which shall not be more than two for each Polling Booth, clearly indicating the full name, Membership Number and address of each of the authorised representatives and the number of Polling Booth at which each of them will be present. Not more than one authorised representative shall be present at a time at each Polling Booth. An authorised representative must be a member of the Institute.

The authorised representatives who are voters for any constituency and who by reason of their being on duty at a Polling Booth, are unable to be present and to vote at the Polling Booth where they are entitled to vote, may send to the Returning Officer by name so as to reach him not later than **28th May, 2019 upto 6.00 P.M.**, application for permission to vote at the Polling Booth where they will be on duty.

The format for appointment of authorized representatives to be given to the respective Polling Officer is also attached.

(L.Gurumuthy)
Returning Officer

FORMAT FOR APPOINTMENT OF AUTHORISED REPRESENTATIVES
ICAI ELECTIONS – 2019

The Polling Officer,
Polling Booth No. _____
_____
_____

Dear Sir,

Re: Appointment of Authorised Representatives:

I am a candidate for election to the Council / Regional Council from _____ India Regional constituency of the Institute of Cost Accountants India.

In terms of the provisions of sub-rule (2) of Rule 26 of the Cost and Works Accountants (Election to the Council) Rules, 2006 as amended read with Regulation 118 of the Cost and Works Accountants Regulations, 1959 as amended, I hereby appoint the following two members of the Institute as my authorized representatives to remain present at your polling booth. It is, however, understood that only one of them shall be entitled to be present at any given time on my behalf at the aforesaid polling booths.

Sl. No.	Full Name of the Authorized Representative	Membership No.	Full Professional Address	Mobile No.	Email id
1					
2					

Yours faithfully,

(Signature of the Candidate)

Place:_____ **Full Name** _____
Date: _____ **Membership No.** _____

Signature(s) of the Authorised Representative (s):

1. _____

2. _____

Signature of the Candidate:

Note: Use of Cell Phone/Video and Audio recording are not allowed inside the polling booth.

The Institute of Cost Accountants of India
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CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

SOUTHERN INDIA REGIONAL CONSTITUTENCY

In pursuance of sub-rule 6 of Rule 6 of the Cost and Works (Elections to the Council) Rules, 2006, further to the List of Voters for the Elections to the Council & Regional Councils, 2019 published vide Notification No.EL-2019/12, dated 28thMarch, 2019 and in Ref.No:EL-2019/12/CORR/04 dated 25th April, 2019, the following changes in the Booth Numbers already allotted have been made on the basis of information / particulars subsequently made available:

Against the voters allotted under Pin Code:	New Booth Allotted
600029	B-043B
600030	B-043B
600040	B-043B
600049	B-043B
600050	B-043B
600051	B-043B
600053	B-043B
600058	B-043B
600060	B-043B
600077	B-043B
600080	B-043B
600094	B-043B
600099	B-043B
600101	B-043B
600102	B-043B
600106	B-043B
600107	B-043B
600110	B-043B

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

Southern India Regional Constituency

The application of the following voters for voting by post / change of booth have been accepted and permitted to vote by post / in the changed booth as per the list given below:

Voter Srl. No	Changed Allocation
3386	B-069
7579	B-038
2617	B-038
5563	POST
3627	B-045
808	B-035
1816	B-034
6379	B-045
5447	B-067
351	B-034
5755	POST
6190	B-038
2343	B-038
3877	B-044
8042	POST
3742	B-038
1350	POST
2710	B-038
654	B-035
6874	B-035
402	B-036

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

7559	B-043
6523	B-069
6081	B-044
7686	B-033
5839	B-075
123	B-035
7681	B-049
1133	B-035
1118	B-048
459	B-036
2385	B-058
7849	B-035
7543	B-043
6864	B-076
3650	B-044
8394	B-071
181	B-036
3916	B-062
422	B-033
2146	POST
6125	B-066
2753	B-047
1512	B-035
7660	B-049
163	B-035
6709	B-065
7922	B-034
6839	B-069
7693	B-038
7688	B-033
3071	B-043B
1212	B-069
6111	POST
5770	B-051
5669	B-076
7604	B-033
7774	B-076

4368	B-049
6167	B-038
7576	B-036
86	B-035
6519	B-038
7656	B-049
860	B-035
65	B-075
7815	B-051
516	B-040
1168	B-043
7510	B-041
4441	B-033
1979	B-033
839	POST
7620	B-051
7724	B-076
7743	B-049
7722	B-041
915	B-035
5075	B-047
7940	POST
6354	B-064
4944	B-035
555	B-035
7727	B-050
4501	POST
4591	POST
7411	B-076
7652	B-041
4556	B-034
7779	B-041
7723	B-039
7703	B-051
7671	B-033
7672	B-038

6766	B-044
4400	POST
4449	B-049
6785	B-049
6466	B-075
7791	B-051
4525	B-034
4381	B-075
6858	POST
7769	POST
82	B-070
2325	B-038
4392	POST
4363	B-051
1274	B-036
1388	B-049
7839	B-035
4364	B-075
7684	B-041
6612	B-047
8078	B-051
71	B-051
5208	POST
6650	B-049
6094	B-049

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India

(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

13th May, 2019

NOTIFICATION

Submission of Certified copy of Manifesto or Circular

No. EL-2019/20: In pursuance of clause (e) of sub-rule (3) of Rule 42 of the Cost and Works Accountants (Election to the Council) Rules, 2006 as amended, it is hereby notified that a certified copy of manifesto or circular along with a declaration by the candidate as given in the enclosed format should be sent by a candidate whose name has been included in the final list of nominations for Elections to the Council and Regional Councils, 2019 to the Returning Officer by speed/registered post within 15 (fifteen) days of its issue.

(L.Gurumurthy)
Returning Officer

Copy to: All candidates

ELECTIONS - 2019

Declaration by the Candidate

I _____ FCMA/ACMA _____ , a candidate for the Election 2019 to the Council/ Regional Councils* of the Institute of Cost Accountants of India from _____ India Regional Constituency, do hereby submit a self attested copy of my manifesto/ circular* issued on _____in accordance with the Election Code of Conduct dated 26th March, 2019 and Rule 42 of the Cost and Works Accountants (Election to the Council) Rules, 2006.

I hereby declare and confirm that, I, or anyone else on my behalf have / has not* issued‡ any manifesto/ circular other than this in relation to my candidature for Election 2019 to the Council/ Regional Councils* of the Institute of Cost Accountants of India.

I am aware that making any statement knowing it to be false; or without knowing it to be true; or suppression of any information; or concealment of any fact shall attract the provisions of the Cost and Works Accountants Act, 1959; the Cost and Works Accountants (Election to the Council) Rules, 2006 and the Cost and Works Accountants Regulations, 1959.

Signature of Candidate

Name in Full _____

Membership No. _____

Address: _____
_____
_____

Mobile No. _____
Email ID _____
Dated ___ day of _____ 2019
Place _____

_____
*Strike out whichever is not applicable
‡Attach certified copy of manifesto / circular issued.

The Institute of Cost Accountants of India
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CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

Western India Regional Constituency

The application of the following voters for voting by post / change of booth have been accepted and permitted to vote by post / in the changed booth as per the list given below:

Voter Srl. No	Changed Allocation
2533	B-029
3057	B-023
1428	POST
2118	B-029
4113	B-019
34	POST
3500	POST
3600	B-007
950	POST
3611	POST
1003	B-019
1014	B-019
4545	B-024
1005	B-019
6174	B-019
967	POST
992	B-019
2702	B-014
2681	B-029
3508	B-023
1438	B-007

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

936	B-019
240	POST
3456	B-021
1025	B-001
2157	B-029
1833	B-029
2293	B-011
1172	B-029
6307	B-001
1191	B-019
1422	B-029
6176	B-019
2997	B-029
2280	B-029
3010	POST
1551	B-024
3495	B-007
3584	B-014
3616	B-010
1162	B-016
4851	B-022
6	B-030
3046	B-029
2814	B-029
5601	B-015
2453	B-029
1013	POST
4520	B-024
1560	B-029
5761	B-015
3583	POST
3603	B-014
4694	B-024
1017	POST
4489	B-022
1408	B-029
1561	POST

5333	B-024
3635	POST
2491	B-029
2766	B-029
3545	POST
3047	B-029
3702	B-022
4979	B-022
2716	B-001
1781	B-022
3574	B-028
4099	B-025
2198	B-029
3638	B-012
1049	B-022
3361	B-029
154	B-004
6160	B-001
1406	B-013
2668	B-029
631	B-003
2099	B-012
2044	B-029
3974	B-029
971	POST
6175	POST
3569	B-014
5234	B-021
149	B-030
796	B-019
3613	B-022
952	B-029
2651	B-029
3703	B-022
3379	B-029
3572	B-007
1416	B-029

3788	B-016
990	POST
5714	B-015
2998	B-029
544	B-001
5261	B-022
5293	B-022
4120	B-022
4605	B-022

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

Ref. No.: EL/2019/5/2019 Dated: 24th May, 2019

ELECTIONS TO THE COUNCIL AND REGIONAL COUNCILS, 2019

WESTERN INDIA REGIONAL CONSTITUTENCY

In pursuance of sub-rule 6 of Rule 6 of the Cost and Works (Elections to the Council) Rules, 2006, further to the List of Voters for the Elections to the Council & Regional Councils, 2019 published vide Notification No.EL-2019/12, dated 28thMarch, 2019 and in Ref.No:EL-2019/12/CORR/05 dated 26th April, 2019, the following changes in the Booth Numbers already allotted have been made on the basis of information / particulars subsequently made available:

Against the voters allotted under Pin Code:	New Booth Allotted
411013	B-023
431136	B-003
400023	B-012
400016	B-014
401105	B-015

(L.Gurumuthy)
Returning Officer

ELECTIONS - 2019

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

NOTIFICATION

Re : Withdrawal of Nomination for Elections to the Council and Regional Councils, 2019

No. EL-2019/17: In accordance with Rule 14 of the Cost and Works Accountants (Election to the Council) Rules, 2006 as amended read with Regulation 118 of the Cost and Works Accountants Regulations, 1959 as amended, it is hereby notified that no notice of withdrawal of candidature in respect of four Regional Constituencies for the Elections to the Twentieth Council and four Regional Councils (2019-23) has been received within the specified date and time.

(L.Gurumuthy)
Returning Officer

The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)
CMA Bhawan
12, Sudder Street, Kolkata – 700016.

May 03, 2019

ELECTIONS 2019

The last date and time for withdrawal of nomination, as notified vide Notification No.EL-2019/1 dated 26th March, 2019, is Monday, the 13th May, 2019 up to 6:00 PM.

(L.Gurumuthy)
Returning Officer

Benevolent Fund

FOR THE MEMBERS OF THE INSTITUTE

CMA Bhawan, 12 Sudder Street, Kolkata - 700016

FOR ATTENTION OF THE MEMBERS

The Institute is maintaining Benevolent Fund for the Members (MBF) of the Institute to provide assistance to the members of the Fund in case of financial help to the beneficiary or to the dependants in case of death of beneficiary. Members whose names continue to exist in the Register of Members of the Institute can apply for Life Membership of the Fund.

DETAILS OF BENEFITS AVAILABLE

- Outright grant not exceeding Rs. 3,00,000/- in each case to the beneficiary in the event of death of the member.

- Outright grant not exceeding Rs. 1,50,000/- in each case to the member and beneficiary for critical illness like cancer, heart/cerebral attack or any other disease having risk of life of the beneficiary to be duly certified by the doctor under whom the treatment is continuing.

- ***Illness or Temporary loss of employment of member:***

i) Expenses incurred in connection with temporary loss of employment or for marriage of daughter of a member during temporary loss of employment till the date of application should not be less than Rs. 5,000/- and not exceeding Rs. 15,000/- and further expenses are required to be incurred for the above mentioned purposes.

ii) Assistance for the above purpose shall be limited to actual amount claimed or Rs. 10,000/- whichever is lower, in the event of the member is not providing surety and where surety is provided maximum assistance shall not exceed Rs. 15,000/-. Surety should be a member of the Institute having his upto date membership and other dues paid to the Institute and belonging to the Region in which the member resides and should provide valid and authentic documents required in support as a surety. Financial assistance not exceeding Rs. 7,500/- will be granted for education of a dependent son/daughter of a deceased member. This financial assistance shall be provided once for a member.

- ***Illness of Spouse / Dependent Children of a member:***

i) Expenses incurred till the date of application should not be less than Rs. 10,000/- and further expenses are required to be incurred.

ii) The member should not be receiving medical reimbursement from his employer or reimbursement disallowed by the employer should exceed Rs. 10,000/-.

iii) Application for assistance should be supported by a surety who should be a member of the Institute having his up-to-date membership and other dues paid to the Institute and belonging to the Region in which the member resides and should provide valid and authentic documents required in support as a surety.

iv) The financial assistance is limited to actual amount claimed or Rs. 1,50,000/-, whichever is lower.

Income Tax Benefit

Contributions to MBF qualify for section

80G Exemption

Procedure to become member of MBF

➔ The prescribed fee for life membership is Rs. 7,500/-. The form can be downloaded from this link *https://eicmai.in/external/PublicPages/WebsiteDisplay/forms/mbf-form.pdf* which you may fill up and return to the Secretary along with a **Demand Draft/Cheque** for Rs. 7,500/- in favour of **"ICWAI Members' Benevolent Fund".** You may apply online also by visiting this link ***https://eicmai.in/MMS/Login.aspx?mode=EU***

For more information please visit the link given in *https://eicmai.in/external/Home.aspx#*

RNI NO. 12032/1966

Postal Registration No. : KOL RMS /139 /2019 – 2021
'D' Number MH/MR/TECH/47/10/2019
License to post without prepayment, WPP License No. : MR/TECH/WPP/KOL RMS/354/2019
Posted at Mumbai Patrika Channel Sorting Office, Mumbai 400 001
Posting Dates : 10th, 11th & 12th day of each English month only.
Date of Publication : 10th of every month.