NEW TECHNOLOGIES AND THE ACCOUNTANCY PROFESSION
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Learning Objectives

At the end of this discussion, you should be able to:

• Explain the current state of the Accountancy profession

• Identify the trending IT developments affecting the Accountancy profession

• Discuss opportunities created by the new developments/technologies

• Describe new threats to the profession

• Identify new skills required of today’s accountants
NEW TECHNOLOGIES AND THE ACCOUNTANCY PROFESSION

CONTENTS

IT Skills Required to be Relevant as Accountants

Concluding Thoughts & Recommendations

Questions and Answers
In today's world, digitalization for professions has become a necessity rather than a choice. Professions that do not embrace technological changes will undoubtedly take their places on the dusty pages of history.
OVERVIEW OF ACCOUNTING PROFESSION

- Compilation (Bookkeeping) Services
- External Auditing Services
- Internal Auditing Services
- Forensic Services
- Taxation Services
- Valuation Services
- Human Resource Services
- Financial Advisory Services
- Bankruptcy & Insolvency Services
- Etc

Identify, Measure, Verify and Report
Accounting Activities – Threatened?

- Generation of Invoices/Receipts
- Preparation of reports
- Consolidation of Accounts
- Computation of numerical data
- Reconciliation of accounts
- Funds transfer (Payments)
- Loan application appraisal
- Investment appraisal
- Verification of fin. Transactions
- Inventory Count
FOUR PROBLEMS AFFECTING ACCOUNTING

• HUMAN ERROR – The leading cause
• Lack of management Integrity
• Failure of new Accounting Rules & Regulations to curb Accounting frauds
• Traditional Accounting Roles unsuitable to new business models
ARE WE READY FOR THE 4TH INDUSTRIAL REVOLUTION?

• 1st Revolution (18th Century) – Steam, Coal & Water Power
• 2nd Revolution (end of 19th Century) – Electricity, Petroleum & Assembly Lines
• 3rd Revolution (20th Century) – Computerization
• 4th Revolution - ???
ARE WE READY FOR THE 4TH INDUSTRIAL REVOLUTION?

1st: Mechanization, water power, steam power
2nd: Mass production, assembly line, electricity
3rd: Computer and automation
4th: Cyber Physical Systems
With the Fourth Industrial Revolution, triggered by digital technologies, it is estimated that some professions will disappear completely, some will develop more, and new branches of professions that were never known will emerge. As a result, it is inevitable that these systems will (and are) influence our profession - Accountancy.
Increasing use of Digital Technology – Professionals will use increasingly sophisticated technologies to enhance their traditional ways of working. Already happening today across the globe.

A Radical Shift (Total Takeover) – Here, technology doesn’t simply streamline and optimise that traditional approach, it actively displaces the work of traditional accounting professionals.
ACCOUNTING TASKS MACHINES CAN DO

- Bank Reconciliation
- Responding to queries from other functions (AI Chatbots)
- Audits
- Monthly/Quarterly/Yearly processing
- Accounts Payable/Receivable processing
- Supplier vetting and set up
- Evaluation of bids/proposals
- Expense management
Against this unabated rise of digitalization, is the accounting industry ready for this revolution?

- Cloud-based Accounting Systems
- Big Data & Analytics
- Internet of Things (IoT)
- Blockchain Technology
- Artificial Intelligence & Robotics
Cloud-based Accounting Systems

The cloud offers the Accounting industry a new way of doing business. Some of the advantages:

• Real-time Services to clients - financial reporting and other services.
• Increased collaboration between Accountants and their clients.
• Files can be viewed, shared, edited from anywhere and at anytime.
This offers Accountants/Auditors some advantages:

- Testing Transactions at Source
- Testing complete set of data (100% check)
- Predictive Analytics (Assist in Risk Assessment)
- Evaluation of programmed controls
- Avoidance of Analysis Paralysis
BIG DATA & DATA ANALYTICS

BIG DATA TECHNOLOGY
EMPOWER THE RIGHT DECISIONS.

Faster, better decision making
Cost reduction
New products & services

BIG DATA ANALYTICS

ICAN
INSTITUTE OF COMPUTATIONAL AND APPLIED \n\nSOLUTIONS
Internet of Things (IoT)

• The Internet of Things is made up of devices that connect to the internet via WiFi, Bluetooth, or cellular data connections. Cisco and DHL predict that by 2020, there will be 50 billion connected devices. The amount of data shared by all of those connected things is massive.
• The Internet of Things is actually about data, not things/devices.
• IoT is a business imperative, not a technology gimmick.
• AI and IoT go hand in hand.
• Internet of Things can impact inventory audits positively.
Blockchain is a decentralized ledger or database that is maintained across a network of computers.

It is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value.
By allowing digital information to be distributed but not copied, blockchain technology created the backbone of a new type of internet. Like the internet (or your car), you don’t need to know how the blockchain works to use it.
Blockchain technology like the internet has a built-in robustness. By storing blocks of information that are identical across its network, the blockchain:

- Is built on Consensus
- Cannot be controlled by any single entity – Decentralized & Open to all Nodes
- Has no single point of failure.
- Immutable ledger – Enhanced Security
- Enhanced transparency of transactions
- Is faster and cost effective
“As revolutionary as it sounds, Blockchain truly is a mechanism to bring everyone to the highest degree of accountability. No more missed transactions, human or machine errors, or even an exchange that was not done with the consent of the parties involved. Above anything else, the most critical area where Blockchain helps is to guarantee the validity of a transaction by recording it not only on a main register but a connected distributed system of registers, all of which are connected through a secure validation mechanism.”

– Ian Khan, TEDx Speaker | Author | Technology Futurist
General:
- Financial data
- Hard assets (physical property and land registry)
- Intangible assets (votes, health data, etc.)
- Smart Contracts
- Crowdfunding
- Identity Management (AML and KYC)
- Stock trading

Accounting & Audit:
- Authentication of Transactions
- Traceable Audit Trails
- Automated Audit Processes
- Tracking Ownership of Assets
- Development of Smart Contracts
- Registry & Inventory Systems for any asset
Artificial intelligence is no longer the stuff of science fiction and Hollywood movies. Is this new technology a cause for concern, or a new avenue for accountants and the profession.

Robotic Process Automation (RPA) is another.
Robots that have more sensory capacities than humans are being developed today to assist us in performing most of the human tasks, through Artificial Intelligence (AI).
Automation, which includes both mechanized robots (whether humanoid or drone-shaped) and artificially intelligent software programs, are predicted to eliminate 6% of the jobs in the U.S. in the next five years.

Deloitte estimates that 39% of jobs in the legal sector could be automated in the next 10 years. Separate research has concluded that accountants have a 95% chance of losing their jobs to automation in the future.
According to consulting firm Accenture, “automation, minibots, machine learning and adaptive intelligence are becoming part of the finance team at lightning speed.”

**Benefits of RPA**

Accenture Consulting estimates RPA to yield the following benefits:

- 80% Cost Reduction
- Task Performance Time Reduction of 80% – 90%
- Increase in output quality by human error elimination
- Scalable solutions unlike human-based teams
- Integration to existing Accounting ERP systems
- Allowing for local competency and control
Is AI & Robots the Future?

• No employee holidays
• No sick leave
• No disciplinary issues
• No wage pressure – no industrial strike
• Easy to replace
• No Redundancy cost
• Low cost in the long term
• Consistent output
Key Questions:

- What new opportunities and threats will these systems create in accountancy profession?
- How will digitalization and technology affect the professionals?
- Is the accountancy profession and professionals ready to change?

These questions are being asked and discussed in the accounting industry by stakeholders.
FIVE JOBS UNDER THREAT BY NEW TECHNOLOGIES

• Compilation/Bookkeeping

“I will happily pay for my daughter’s university education, provided she won’t pursue a degree in Accounting” ---- Why?
Human financial analysts can no longer compete with Artificially intelligent financial analysis software that can read and recognize trends in historic data to predict future market moves.
Inventory Managers & Stockists

The supermarket employee restocking the cans in the aisle may soon no longer be a person. A robot called the Tally is designed to audit shelves for out-of-stock items, misplaced items, and pricing errors.
First it was the ATM that ate into human banking jobs, then the smartphone app. It’s likely that many of the remaining human-based teller and representative banking jobs will be finished off by AI.

AI won’t just be able to conduct cash transactions, it will be able to open accounts and process loans at a fraction of the cost and time it takes for human employees.
If your role as a tax consultant is limited to tax computations and filing of tax returns, then you are at the risk of becoming redundant in future. Even resolution of tax disputes is being automated through AI.

The aspect of Tax consulting job that seems a bit safe for now is Tax Planning & Advisory Service.
ARE AUDITS DEAD BECAUSE OF AI & BLOCKCHAIN?

• Accounting professor David Yermack of New York University thinks the audit profession may be dead in 10 years due to the impact of AI and Blockchain.

• He said the distributed ledger technology (DLT) reduces the need for audit by 97% as transaction data becomes immutable. Fraud the way we know it today will effectively disappear.

• But while DLT is extremely secure by design, there are other opportunities for fraud that will develop alongside the technology.

• Need for us to refocus audit from "after the fact" to "real time and continuous exercise."
ARE AUDITS DEAD BECAUSE OF AI & BLOCKCHAIN?

• Ryan Lazanis, a CPA said:

• "An auditor's job has two parts," First, to provide independent verification of third-party data, but also to apply accounting standards, and use judgment to verify that the record is valid and accurate. The audit role will shift more to the second part than the first."

• He went on to say that blockchain, as it develops, will be an "interesting tool" for auditors, as it provides the ultimate audit trail." Expertise in blockchain will be highly sought after by firms in the future, he added.
ARE YOU GOING INTO PRACTICE?

Remember!!!!:

• Many small businesses are implementing cloud accounting systems.

• Our Role as middlemen between the government and the business community will soon disappear.

• Practicing firms can no longer survive on Bookkeeping and Compliance services.
ARE YOU GOING INTO PRACTICE?

Take advantage of:

• Cloud Technology
• Social media
• Video Conferencing
• Big Data & Analytics
• CRM Systems
• Finance Professionals to focus on higher level jobs - Service more clients
• Offer personalized services to clients
• Adapt to change & offer new services
• Save Time – Become more efficient & focus on relevant data
• Save Cost (Long term)
• Mobility of service – Geography unimportant
• Enhanced visibility
• New Skills for Accountants – Beyond number crunching
THREATS FROM NEW TECHNOLOGIES

• **Removal of the “Middleman” - The Accountant.**

• **The Consolidation of firms as the ‘Big Four’ begin to target smaller businesses.**

• **Opportunity for junior level Accountants to learn likely to be eroded with automation of low-level tasks.**

• **Complex business models – more accounting standards**
THREATS FROM NEW TECHNOLOGIES

- Loss of jobs – Reduced need for humans
- No more core Accountants – Jack of All trades – New skills needed to compete
- Risk of cyber attacks
- Too many accounting apps in the market - confusion
- Commoditization of compliance function
Recommendation – Consider these New Skills

- **Data Analytics Skill**
  - Financial
  - Non-financial

- **Leadership & Business Advisory Skill**

- **Cybersecurity Skill and IT Risk Management**

- **Communication & Media Literacy Skill**

- **Project management Skill**
  - Team Building
  - Risk Mgt

- **Emotional Intelligence Skill**

- **Fraud Detection Skill**

- **Technology and Computational Thinking Skill**
Recommendations

• Carry out a SWOT Analysis of yourself.

• Upgrade yourself as a future accountant with knowledge in digital technology, globalization and evolving regulations.

• Professional accountants will need the skills to provide more all-inclusive corporate reporting, which tells less about the numbers and more about the narrative of the organization.

• Professional Accountants should embrace cloud accounting and switch from being a “redundant data accountant” to a “real time accountant. Add value to client’s data real-time!”

• To stay competitive, accountants may need to play a larger role in providing guidance to their clients.
Recommendations

• Be The Value Intermediary

CLIENT

YOU

MGT INFO & FINANCIALS

• Don’t let “IT” be between YOU and the Business Logic

• Be the master of Technology
Concluding Thoughts

• In 2016, the World Economic Forum (WEF) predicted that 65% of children entering primary school are expected to end up working in roles that currently do not exist.

• Technology advances have historically eliminated some jobs and created others. There’s no reason to think that this trend won’t continue regarding Accountancy. Jobs will continue to be created, enhanced and destroyed much as they have in the last 70 years.

• Accounting departments overall will be trimmed down and the employees left will be able to focus on more strategic initiatives, like process improvement, cost control, and capital optimisation.
Concluding Thoughts

• It is almost certain that AI systems will lead to a net reduction in jobs in future. Our number crunching role will nosedive while business advisory role swells.

• AI will increase audit quality, as it begins to allow auditors to ask a lot more questions. It will improve efficiency in audit work by providing more insight.

• Who wouldn’t want to leave bank reconciliations to a machine? Even though machines will become an accounting professional’s most valued colleague in the future, there’s nothing that can replace the emotional intelligence humans bring to the job.
Concluding Thoughts

• Whilst there are undoubtedly a number of challenges facing the accounting industry, we can rise to them. If we’re aware of any upcoming problems, we can take the necessary steps to support our clients with the new needs they might have.

• You may have the ACA badge after this 3-days induction programme but if you’re an ambitious accountant looking to progress your careers in an ever-evolving role, experts warn the focus needs to be more on a broader range of skills, trust and emotional intelligence –if you are serious about bagging the job of your dreams.
Concluding Thoughts

• Accounting is not going away soon. Companies will continue to prepare financial statements for investors, deal with tighter regulations, borrow money and need to balance their books.

• Do not belong to the group of many Accountants who do not understand what is going on or those that ignore the wave of technology.

• If we focus on the real values we as accountants provide to businesses, we can deliver above and beyond on them and secure our future.

• Many accountants fear new technology like AI and Robots will make their role redundant. But is this fear valid?
Concluding Thoughts

• Your real value as an accountant lies in the advice you offer on top of your technical expertise.

• Become the strategic business adviser in your organization or to your clients.

• The future is now. Embrace it!
Concluding Thoughts

Let us remember the past with gratitude, live the present with enthusiasm, and look forward to the future with confidence.

• By Pope John Paul II
Thank You
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Questions??????

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