Impact of next wave of Technology on CAs

Sourav Yadav on 07 December 2018

Back in mid-1980s when the computer was first introduced by the Rajiv Gandhi govt., there was a fear of job losses. Although computers came and conquered. These days even the smartphones which we use are thousand times powerful than the computer that was used by NASA to send Neil Armstrong into space in 1969. Now we have got more powerful technologies than the computer. Most of them are AI (Artificial Intelligence) based and many others are new inventions. But AI is among those that is going to tremendously disrupt our lives. You just google anything and after a few minutes you can see add related to the search you have made, or just look for any youtube video and then you will be shown all the videos/related videos of any particular channel you have just watched. So how come google or youtube could guess what you are more likely to watch? The answer to that is simple i.e they will suggest you things on the basis of what you have already watched. But the hard thing is how they do it? The answer to this question is the most potent weapon in the hands of today’s technologists, the AI. AI has been developed a lot in recent decades and what we are witnessing now is the conversion of such knowledge into active daily use. The algorithms mine the data and help companies use such data to meet individual needs. You will be
shown only what you like or what you generally look for on these sites. There is not just AI but 5G, Quantum computing, gene editing, extraterrestrial colonization (Mars mission) and many other things.

But in this article we will restrict our discussion to AI and how it is relevant to us and what can we do to make ourselves future ready. Let us start from the pre-computer times to the present times and then we will dwell in the future. I have tried to take the most familiar examples so that it could be better understood.

In the pre-computer era there used to be big red books (Rokad bahi, khata bahi) and were tediously maintained by an accountant. Maintaining such manual accounts was not an easy job and an accountant could not maintain books of accounts for many businesses. But with the advent of computerized accounting (tally or any other software-based), a person can write accounts regularly for many businesses (varies according to the nature and size of business). Some people even take up this job for earning additional income by taking up work from end of financial year till the date of tax audits. The essence is that this transformation not only expanded the consumption market but job market as well.

Now come to the second wave of technological revolution, the internet and sophisticated computing technology. “Working on a computer” shifted to working on a network of computers or on a centralized server (I am taking banking so that it is easy to understand and relate). As of today we can use the our bank balance 24 x 7 via plastic cards or other online payment methods. Such transactions are performed with the help of centralized servers so that we can make payment anywhere at any time. This has resulted in a lesser need for physical branches and a single bank can cater to the need of a large number of customers. The market is still growing as income is rising but do you think manpower requirement is growing in proportion to growth of the market and economy? I am not saying that we are witnessing job less growth but what I mean is that manpower requirement (or employment) is not growing with the pace at which the overall market is growing. Even the market growth is mainly due to increased consumption in high and middle-income groups while lower income groups are seeing only marginal increase. So why and how is this happening? This can be attributed to the technological revolution which we are witnessing in
which things are automated with minimum requirement of human intervention. So more work can be done these days with little or no human intervention. At the top level with increased productivity and usage of machine, a person can earn more but this thing paradoxically at the lower level reduces the income or you can say the growth in wages at lower level is not in line with the growth at higher levels. A job that would otherwise require many employees can now be done with the help of algorithms. Suppose you book a cab on Uber. Without any human intervention, you get a cab. If the same business would have been thought of before, you would have to call some centralized office which would have taken care of your need. But now there is no need of any middlemen. Imagine that car also became autonomous (which is not a distant possibility), you won't even need a driver!!! The human element will be totally eliminated (of course, except you who is being served).

Let's take another example. How many of you visit your bank branch regularly these days? I would say very few. You can check account statement online, transfer money online via plethora of apps at your disposal, get customer support online and numerous other features. These days you can even get credit online. The banking sector has seen the most paradigm shift due to advent of the technological revolution.

If we look at other sectors such as new and popular startups like Zomato, Urban clap, OYO rooms etc we find that they are mostly platform-based services which connect the provider and receiver of services on their platform. Drones are threats to delivery boys of all online to
offline service provider companies (Zomato, amazon, flipkart etc.) These people are certainly replaceable by drones in the near future (may 15-20 years). Not just these aforementioned jobs but even jobs like that of a risk manager ( hedge funds are increasingly using AI to manage risks), accountant, stock analysts etc may face very low demands with increased digital penetration.

Earlier a tax audit report was physically submitted in an income tax office. Now you file it electronically and upload a scanned picture of the audit report and financial statements. Even the department use techniques such as data mining to select cases for scrutiny. With increased technological sophistication less people can do more work. These days softwares are commonly used to file income tax returns and a person can file a number of returns in a day which was not possible previously when returns had to be prepared and submitted manually.

Similarly, audit of manual books used to take more time as compared to present day audit when digital records can be audited in less time. In developed economies, AI is being used to filter out suspicious transactions from books of accounts. Such advancements are paving way for more work to be concentrated in lesser hands. There are numerous examples of this phenomenon.

Some examples are:

i. Online Shopping - Amazon, Flipkart
ii. Search Engines - Google
iii. Consultancies - Big 4, other multinationals
iv. Socializing - Youtube (for videos), facebook, Instagram.
v. Texting/Messaging - Whatsapp, telegram

I have included consultancies because financial services industries are primarily driven by data and AI needs huge data to give desired results. The more data at its disposal the better algorithms that can be generated. Since a lot of money is required for using AI in financial services, only those with deep pockets can foray into AI enabled tech for the time being. This will give them first mover advantage and will further their interest. The gap with other
players will widen and they will dominate even more. This is what AI is going to do in every field. These futuristic technologies will certainly increase the “income gap”.

From the above example, I want to convey that there will be a “concentration” on the provider side. Although there will be more democracy on the receiver end like AI will enable services of top-notch doctor to be provided to even poor people in distant lands. 5G will enable the doctors to perform robotic surgeries in distant lands equipped with robotic surgery facilities. 5G provides latency of less than a millisecond which can be used to perform such complicated tasks. Top academicians can reach to students in remote lands via video streaming (which is already common these days). Even in our CA course, the top faculties from Delhi/Mumbai have now got presence in many cities of the country either via live streaming or pen drive classes. Such a thing was not so easily possible a decade back or two. If we look at the downside then it can be said that such system puts local teachers at direct competition with the top-notch faculties. This is good for students but may not be so good for the local ones. In this way a few teachers get majority of students and a majority of them gets few students. This is another example of a concentration on the supplier side.

So technological concentration will result in “concentration of service provider but the democratization of service receiver”. Now, how are we gonna deal with this? First, we have to understand that the possibility of getting out of job market in every 10 years due to technological disruptions is very real. Take for example in the period 2000-2010, “internet café” seemed to be the most lucrative business, then came the mobile phone internet era and internet cafes gradually shut down. These café then turned into mobile phone and recharge shops. But the recharge frenzy went away with the proliferation of payment apps like paytm, mobikwik and a plethora of others. At present these recharge shops are turning into “mobile repair” shops. Even they might be disrupted in next ten years by advanced phones that may not need a hardware repair. The phones might become use and throw (eco-friendly as well)

This was a very small example. Even in our profession, we have such threats. These are threats which come with a very short warning. But the question is, “how to deal with it?” The answer to this question is that we have to consistently reskill ourselves. This can be
accomplished by acquiring in-depth knowledge of any specific field which we find very interesting. A CA student is taught many subjects but the content which is taught is superficial in nature except for the accounting and auditing subjects. Suppose you are interested in law, so you must pursue specialization in law where you learn to interpret rather than mug up the sections for an exam that tests your penalty provision knowledge or I would say provision related knowledge rather than any understanding of law. If you are interested in finance, you might opt for a CFA or an MBA (Finance). Some might say that there are post qualification courses to which I would say that yes there are but if you want to “outperform” then you must be ready to “outdo”. The most important trait of any successful person in the world is that he has “shown up for work every single day for a very long period”. If you really have high aims then you must put in the work. You will have to do the crude hard work and keep in mind that hard work will be painful. It will neither be easy nor give instant rewards. You have to be patient in your endeavor.

I remember from an interview of Yuval Noah Harari (author of Homo Sapiens: A brief history of mankind, Homo dues & 21 Lessons for the 21st century) on his latest book (21 lessons......century) where he shared his views on how the future education should be like. He said that education at present is like building a stone foundation i.e a concrete foundation so that you have a tall &strong building. But with the advancement of technology, education will have to become like a tent which you have to fold quickly as you don’t know when you will be rendered out of job and you will have to place the tent at a new place (i.e learn new things rapidly to adapt with the changed environment).

I think the above example is sufficient to explain how things are going to be like in near future. In this country, we already have a large population comprising mostly of young people. “Resources will be scarce, demand will be huge” so brace yourself.

Do share your thoughts with me.

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SOURAV YADAV

I understand that. It got somewhat long.
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