Broad Matters Season 9 Episode 2

"AI Automation in Accounting" with Musaib Ashraf

Ken: Welcome to Broad Matters.

Quinetta: A podcast bringing you thought leadership, innovative perspectives and real-world impact from Michigan State University's Eli Broad College of Business.

Ken: I'm Ken Szymusiak, managing director for the Burgess Institute for Entrepreneurship and Innovation...

Quinetta: and I'm Quinetta Roberson, the John A. Hannah Distinguished Professor of Management and Psychology.

Ken: We're excited to introduce our guests, Musaib Ashraf, who is an associate professor in the Department of Accounting and Information Systems here at Broad.

Musaib: We have the ability to impact millions of lives. Whether we're studying stock markets, whether we're studying how firms operate, whether we're studying corporate governance, whether we're studying tax policy or the external audit. That's all directly or indirectly affecting the value of these companies that we are all invested in, right?

Quinetta: Musaib's latest work dives into one of the most pressing questions in modern business: can automation and AI software make financial reporting better?

His newly published article in the Review of Accounting Studies investigates how public companies are weaving AI into their accounting systems, covering not only the benefits but also the risks and disruptions these tools bring. Along the way, he offers practical guidance for C-suite leaders eager to strengthen their own systems and stay ahead of the curve. Thank you for joining us, Musaib.

Musaib: Thank you very much for having me.

Ken: What first inspired you to study automation in financial reporting?

Musaib: So, there's a bit of a story to this. So, I've always been what I like to call a tech nerd or tech geek. Whatever. Right. Even before I did my PhD., people get excited watching a football game. I get excited playing with the new smartphone.

It's just how I'm built, right? So then, you know, I decided to pursue my PhD in accounting. I didn't go in with this notion that I want to work on emerging technologies. Right. That's where a lot of my research is - emerging technology, corporate governance, you know, cybersecurity, automation, artificial intelligence, that type of stuff. As you do your PhD and look at what data is available out there, you look at what interesting questions need to be answered.

At that point, I was wanting to write a paper, you know, on machine learning, artificial intelligence, automation, because that was kind of the new and coming thing. This notion of machine learning, artificial intelligence has been around for a very long time. It's not just when Chat GPT showed up. The notion of artificial intelligence existed since 1950s. It's been around for a while.

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Technology has kind of been developing towards that way. And I've always wanted to write a paper kind of in this area. I just never could. Because we as researchers, we are limited by the data that we have access to. Right? Oftentimes we don't have access to proprietary data, especially as accounting researchers. We often use publicly available data, you know, to conduct our research.

I couldn't really write a paper in this area because I didn't really have access to data. The years kind of go by. I've graduated, I'm here, Michigan State, you know, I'm working on other research projects. And this one research project in particular, it was going through the review process of the journal, and it involves textual analysis. Right. And for those of you that don't know what I mean by texture analysis, we are looking at stuff that companies were disclosing in their 10-K filing. The annual report that companies file with the SEC.

Because this textual analysis computationally intensive, I don't ever do it at my local computer. I do on a server side sitting somewhere, you know, depending on whichever companies offering that. At the time, I was renting a server sitting in Germany. Problem was, I couldn't access that server from my office at Michigan State. A couple of weeks passes and I'm like, I have to get this work done.

I can't do it in the office. I can't connect to it. I'm getting distracted at home doing other stuff. So just like this very frustrating situation, right? So, one time I'm sitting in my office and I kind of had this "aha" moment like, hey, we subscribed to this service called Calcbench. Some of my colleagues use it in teaching. Some of us use it in research and what this service allows you to do allows you to search inside 10-K filings.

It's kind of like Google search, right. So, you don't have to use your own tools. You can just type in something in search. So, I'm doing this and I'm like, hang on a second, let's just try tapping some of these other keywords. Artificial intelligence, automation, see what these filings say. Right. Maybe this is a data source that I can use and I did that. I'm like, hang on, this is a data source I can use.

I think it looks like companies are disclosing when they are using this type of software. So now I can use this data to write this paper. Right now, I know when these companies are using the automation and AI software in their financial reporting, in their accounting. So now if I can gather that data, then I can write, you know, how does it impact their financial reporting.

Once that kind of clicked. That's kind of where this paper, you know, its kind of just went forward from there.

Quinetta: So I heard you talk about kind of your interest in the automation side. And I wanted to know more about the financial reporting side.

Musaib: Yes.

Quinetta: Like how do you get there or how did you connect those together?

Musaib: That's really honestly, being an accountant.

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That's one of our main focuses. The quality of the accounting and financial reports. I'll give you an example of why are we interested in this? I don't know how much you know. Follow the stock market. There's a company called SMCI, right? They build servers. They really exploded over the past couple of years because, you know, investments in AI. Their fiscal year ends June 30th, I think, so they have to file their 10-K, the annual report, within 60 days. Last year, when they were supposed to file the annual report, they delayed it. They filed something with the SEC saying, "Hey, we just can't file this right now." Their stock price immediately jumped 20% the next day. 20% just because they delayed filing their 10-K. Once it was confirmed that they're going to file it about, I think 4 or 5 months later the stock price went up up, up, up, up. And then they filed it.

And then within that the filing, the auditors said there was a potential for a material problem in their financial reports. And the stock price dropped again. And this is a company that's grown rapidly. They do about 30, $35 billion in sales in a year. And that just kind of shows you how important it is. Quality of financial reports, right.

Investors rely on these reports to monitor the use of their capital. They want to know, hey, we've given this company money. How are they using this money? Are they using this to enhance my wealth? Honestly, it's a core fundamental accounting question. The quality of these financial reports and the quality of the accounting.

Ken: How are you seeing the terminology around AI or machine learning showing up in those 10-Ks? Is it from the perspective of like you're using a Google search query of some sort? Are they disclosing that they are highlighting their use of AI in processes or things like that, or is it do they have to indicate in some way, shape or form that they're using automation in the production of their financial statements that actually hit your desk?

Curious how you can parse through that, like noise versus signal from what your type of research is?

Musaib: The answer to that is the majority of it, definitely. Companies are talking about their products and how they are incorporating this technology in their products because they want to sell these products. A lot of the disclosure is that. Less of the disclosure is within their internal processes, like financial reporting and accounting.

But the way I was able to conduct this research, there is this particular section in the 10-K filing called the Controls and Procedure section. And in that section, firms are required to tell them when there's a material change in their accounting or internal controls. So, within that section, if you make a material change you have to tell them something.

Okay let's focus on this section and let's get this data. What I'm focusing on is the information they disclose in that section. Right. Everything else is like noise relative for my specific research question. So that was kind of the "aha" moment. Like, hey cool, let's do this.

Quinetta: As someone who was an accounting major for the first three years of college, I'm starting to have a little PTSD here, but (laughs)

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What did you discover about automation's impact on financial reporting quality?

Musaib: Broadly speaking, the data suggests a few things. Companies that introduced this automation in AI software, they seem to have stronger internal controls, fewer errors in their accounting and financial reports, and greater efficiency, meaning they seem to be getting the work done more quickly. So that's kind of the positive benefits of introducing this software in your accounting and financial reports.

The data also suggests there seems to be some cautions or caveats here, because companies that are introducing this automation in their software, the data suggests that they seem to be pulling back oversight afterwards. So maybe because they think this is better, you know, we don't need to oversee this work product as much anymore. What I can see is they seem to be pulling back oversight, both at the audit committee level and the external auditor level.

Right. The two types of entities that provide oversight over accounting and financial reporting at the firm level. But the problem here is this software is not perfect, right? It's never going to completely 100% eliminate problems within accounting. It's going to reduce the frequency. Yes, but it's never gonna 100% eliminate, at least not right now. Who knows what's going to happen in the future, right.

So, when you remove this oversight, what's happening here is errors that oversight would have normally caught, especially the big ones, are not being caught So, the errors and mistakes that you see or the weaknesses that you see after introduction of this software tend to be bigger. They tend to be more costly. So yes, the frequency is going down. But the data suggest because these companies are pulling away that oversight, they're missing the bigger problems.

And that has material impacts on, again, firm value and ultimately shareholder wealth, because then you see significantly larger stock price drops after some sort of weakness or error after the introduction of the software.

Quinetta: You know, thinking about the audit committee as the SEC mandated committee for publicly traded companies, if this oversight is potentially getting bigger, does that suggest that who's on the audit committee becomes even more important?

Or maybe the skills that they look for of who's on the audit committee. Does that have any implications for, you know, thinking about some of the composition or other aspects of their functioning?

Musaib: Very good question. So, this actually ties back to a different research project. It's a little bit older. Me and my coauthors, we looked at, if you have an information technology expert on the audit committee, does that help improve financial reporting?

Again, we didn't really focus on the AI aspect of the argument, that particular research project, but the argument is very similar, right. The more technology is used in the production of accounting and financial reports, arguably you need someone that's part of the oversight function that has a better understanding of this technology. And in that particular research project, the big takeaway was, yeah, okay.

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If you have this information technology expert on the audit committee, it does seem to improve accounting in financial reports. If you take that and you kind of tie it to what's going to happen going into the future, if we're introducing more complex software, automation, AI, etc., I would expect that, yeah, it's probably going to further change the composition of the audit committee.

I suspect the companies will start looking at this and say, "hey, perhaps we should have people on the audit committee that have a better understanding of how this stuff works." I suspect that's probably what's going to happen. I think that's an opportunity for research going into the future.

Ken: What are some of the things that have surprised you most as you dug into this?

The one thing that kind of hit me: it seems kind of rare-ish, like it's not as widespread as you would think. At least at this point in time, the automation and AI software techniques, whatever, seems to be more on the product side, right where companies are building it into their products rather than in the internal processes. I say it's a little bit surprising, but at some level it also makes sense.

These financial reports are being personally attested to by the CEO and the CFO. They're signing off and saying, "we are personally liable for what's in this. Are they going to rush to adopt the latest technologies? They're going to want to ensure that they are getting the quality definitely. In fact, this is part of the motivation of why I studied this. A lot of the survey evidence shows that executives, particularly CFOs, are kind of concerned that, hey, if we introduce this automation type software, if you remove this human involved in this process of producing accounting and financial reports, they are worried what's going to happen. They're nervous about this because they're just unclear, right. Throughout the history of business, really, humans have been intricately involved.

And to be clear, this is not fully automated, or fully AI. It's a component of some piece of their accounting and financial reporting. Internal controls (unintelligible), right. But if you look at survey evidence, these executives are very concerned. Kind of make sense that they are going to slow walk this. So, at some level, I'm hoping that my research gives a little bit of comfort to these executives that, hey, you know, you worried about this, but at least on average it seems like this seems to be improving your internal controls and financial reports.

Quinetta: If we think about other stakeholders like investors, what are the indicators of financial reporting quality? Is it based on the opinion from the accountants or are there other kind of indicators or metrics that you're using in your research to determine variation in quality.

Musaib: From just like a conceptual high-level perspective, what do investors see is high quality? Well, investors want to know the numbers that you are reporting to me.

Do they accurately represent the economic and financial of the firm? Conceptually, that's what you want. Now when we think about research, how can we measure that. So, when we look at financial reporting quality there's different data points. Right? I focused on two. One is a material weakness in internal controls. This is basically saying your internal control environment over accounting and financial reporting.

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Is it strong or is it weak. If it's weak then there's a reasonable likelihood that there's going to be an error in the numbers that you report to investors. The weakness itself doesn't say there's an error, but the weakness itself says, hey, there's a reasonable likelihood that there is an error that we don't know about, or there might be an error going to future.

So, it's a pretty strong signal of potentially weaker accounting in financial reporting. In fact, if you go back to the SMCI example that I talked about, when they eventually did file their 10-K, it kept dropping. And the reason why I keep dropping is the auditor for SMCI noted that there was a material weakness in their internal controls. That kind of signals to investors that hey, they're reporting this, but just be a little bit cautious.

But that's one signal, and the other signal is a little bit more direct signal. It's called a misstatement or a restatement depending on what terminology you use. That's basically a firm files their financial statements. And then let's say six months down the road, 12 months down the road, two years, whatever. At some point they discover, hey, that financial statement that we filed actually contained an error in it.

So now we have to go back and refile it to fix that error. So that is a pretty direct measure of financial reporting. Where the company's come here and say, hey, oops, we made a mistake, now we have to fix it. In this study, I focus on both. When I say that there's evidence that automation and AI software suggest stronger financial reporting quality, because what I'm observing is a lower frequency of both of those types of indicators, less weaknesses, internal controls and fewer mistakes.

Ken: What do your findings mean for companies considering automation?

Musaib: So, I hope companies, particularly executives, walk away with at least some comfort that, you know, there is reasonable evidence to suggest that, hey, this seems to improve, or at least not harm on average, quality of the accounting and financial reports that my company may produce. But I also want companies and even investors, just to keep in mind that the caveat here that, yes, you know, it seems to be better in accounting, in financial reporting, at least on average.

But just realize that you still need that human oversight, right? Let's not just automate this all and walk away. Right? That's a recipe for disaster. So, if you want to go down this route of introducing this type of software automation, AI software, keep the human oversight. It's still necessary, at least at this point in time.

Quinetta: Do you think that it changes the nature of the human oversight?

So, the work of the CFO or the people who are doing that work can be a bit more strategic in the work that they do? Does it change the future of work for people who are doing that oversight change?

Musaib: I suspect, yeah, it's going to change the nature of not just the work of the people that are providing the oversight, but the people that are providing the boots to the ground, rank and file type of worth.

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Right. I absolutely think this is going to change the way that we work in general. The big question is how much is it going to change and to what extent? Is this going to, you know, supplement the way we work, right? Is this another internet computer type shock to white collar jobs, or is this more of how refrigerators made ice makers obsolete?

And frankly, I do strongly believe that's going to change how we work. But I don't know to what extent it's going to change how we work.

Ken: I keep thinking as we have this conversation, that it could also speed up the information to the market, right? Like, why are we waiting around for quarterly financial reports or annual reports to make decisions when perhaps the future with these tools is that we can actually provide a really sound check on where we're at any given point in time in the company status and assuming that there's good oversight, make markets more dynamic and able to price things more efficiently.

Musaib: It could. We think about that in terms of price discovery, right. Investors get information more quickly. Companies file quarterly reports roughly every 90 days. And then the annual report at the end of the year. A lot of stuff happens between those reports. There is some mechanism for firms to tell the investors. You're supposed to file an 8-K if there's a material event in between those filings, but still, it's not real time.

If in the future, the tools are advanced enough that we feel comfortable enough that, you know, they can constantly generate this information on a real time basis, it could. Now, at the same time, there's also a cost to that, right? It's not all sunshine and rainbows. Yeah, right. There is information overload. There's plenty of research to show that.

If you throw too much information, you know. Then the signal gets lost in the noise. There's also this notion of proprietary cost, and you're disclosing something publicly that your competitors can use against you. If Apple says we're going to have XYZ feature in the next iPhone, Samsung learns that and adds that feature first into their phone. So, they hit the market first with that feature, and perhaps they can steal some sales from iPhone.

Right. So, there is a cost to this disclosure. So generally speaking, when we talk about disclosure you have to find a balance both regulators and companies have to find a balance between what's informative to investors versus, we're disclosing too much so it might be harmful to the firm.

Ken: Yeah, that's a really good point.

Quinetta: What big questions about automation and financial reporting should researchers be tackling next?

Musaib: What I would like to know is hiring trends. What's happening, especially at the rank-and-file levels. As you're introducing this type of software somewhere into the firm, what are you doing in terms of your employees? Are you reducing headcount, which okay, I think most people probably expect that to happen. You know, you could also be increasing headcount, right?

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I mean, these are complex software, at least in the initial years. You could perhaps be increasing it. You could be keeping it the same rate. In some industries there is shortages, right? Especially like for example, there is this huge CPA shortage nationally. Right. Is the software being used to fill in those gaps, and does it really affect employment? All of these are possibilities.

And I think it'd be very, very interesting if we can generate some insights of what are the hiring trends. What are companies doing, at least at this initial stage? I will tell you, just in the classroom, students are very, very concerned, right? They're paying significant amounts of money to get this education. And the concern, will we have jobs once you graduate?

How is AI changing the employment landscape? This is not just specifically for accounting. I think this is across the board. Unfortunately, as I tell my students, we don't know. People will predict. Everyone obviously has an opinion, but we just don't know. It's uncertainty. And I don't think this uncertainty is going to resolve in the near-term.

I think it's probably more long term. Wait it out, see what happens. And getting more insight on that front, I think would be very helpful.

Ken: As you're talking about the labor market, the flip side of that is like the tertiary hiring around, like, okay, if leaders have access to better data in real time, they can also begin to witness opportunities that will require them to actually scale up or hire more.

It doesn't always have to be a loss. It could also be spotting a new trend based on the growth trajectory in real time that you wouldn't have had. If you're waiting around and not seeing a signal and what's happening real time in your finances. Right, so.

Musaib: Growing the pie rather than just reallocating shares of the pie, it could happen. That's the thing: uncertainty.

We just don't know yet.

Quinetta: Well, you mentioned the importance of partnerships between researchers and companies and the availability of data, which I have to say that spoke to my heart. I could ask is very generally, you know, and say, what can we do to kind of foster that partnership? But more specifically, what do you need in order for that to happen?

Musaib: Data availability is always an issue. As academics, we can only derive insights from data that we have access to. There's publicly available data and there's proprietary data. Particularly, if you talk about accounting research, we tend to focus on publicly available data because that's what we have access to. But even with publicly available data depends on how much funding we have, because data doesn't come cheap.

We spent lots of money buying data, and if we had funding to purchase other cool data, we could answer other cool research questions, right? But also, if we could get access to proprietary data. And it's not like we need access to like a whole A to Z of the whole company, but, you know, a specific area of the company, we can answer questions that we can't with proprietary.

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We just can't with public data. Right. So of course, greater funding helps us get access to more data and partnerships where companies, you know, if they have a particular problem that they're dealing with, we could get access to a proprietary data. We can help solve these problems. So better funding, better partnerships. As academics, we need to do a better job of speaking with external stakeholders like companies and executives and highlighting that, hey, this is the value we can bring if you are willing to work with us.

Ken: Thanks so much for joining us today, Musaib. If listeners want to keep up with your work, where should they look?

Musaib: Go to my website. It's musaibashraf.com. Pretty straightforward. Or you can Google me. I have a relatively uncommon name, so I tend to be on the first page of Google results.

But if you can't find me, add accounting to the end, or add accounting professor, then I'll be right there.

Quinetta: Thank you so much for being here.

Musaib: Thank you very much for having me.

Ken: Want more news and insights? Follow us on LinkedIn, X, Instagram and Facebook @MSUBroadCollege or visit us on the web at broad.msu.edu/news.

Quinetta: And remember, like, rate and subscribe to Broad Matters on Apple Podcasts and Spotify.

Ken: That does it for this episode. I'm Ken's Szymusiak.

Quinetta: And I'm Quinetta Robertson. Join us next time to hear faculty and staff weighing in on relevant issues and discussing how their work makes an impact, illuminating how and why Broad Matters.