

Degree Project

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The emergence of Big Data and Auditors' Perception

A comparative study on India and Bangladesh

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Abstract:

Title: The emergence of Big Data and Auditors' Perception (A comparative study on India and Bangladesh)

Aim: The aim of the study is to explore and compare the perception of auditors in India and Bangladesh towards the implementation of big data analytics in audit.

Method: In this study a qualitative method has been applied using semi-structured interviews. The study is an exploratory research and has been analysed thematically.

Results and conclusions: Employing the Technology Acceptance Model (TAM) as a conceptual framework, this study conducted a comparative analysis of auditors' perceptions, emphasizing the components of perceived usefulness, perceived ease of use, intention to adopt, and their interactions. The results of the study show that the intention to adopt big data analytics tools emerges as a shared aspiration among auditors from both India and Bangladesh.

Keywords: Big Data, Big data analytics, auditing, Technology Acceptance Model.

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Introduction:

In the 21st century, the business environment is changing expeditiously due to the rapid change of technology (Dobbs, Manyika & Woetzel, 2014). The business professionals also believe that the reason behind changing the organizational environment is technology and data analytics (Rikhardsson and Yigitbasioglu, 2018). As noted by Gershkoff (2015), Big Data and data analytics (DA) is an emergent industry. According to Bhimani and Willcocks (2014), it is a challenge for organization to generate increasing amount of data due to the rapid change of technology, but it could be an opportunity if organization can turn to account it. The audit profession is not exempted from this and is also adjusting with this transformation (Dowling & Leech, 2014) on account of competition (Alles *et al.*, 2006) or client requirement (Appelbaum *et al.*, 2017). As noted by Alles (2015), it is not possible for public auditing firm to audit in a traditional way due to the Big Data and the most fundamental reason for using Big Data to enhance and ensure audit quality. Byrnes, *et al.* (2014) and Earley (2015) suggest that auditing firm can maximize the benefits by adopting Big Data in auditing procedures. According to Salijeni (2019) adopting Big data and Data Analysis reduced the cost in Europe by €425 billion in the manufacturing industry and also generated economic benefits for audit firms also. According to Richins, *et al.* (2017), many ordinary and traditional accounting and auditing activities would be replaced by the Big data and Data analytics. FAR (2015), a Swedish professional institute for accountants, assume that soon 45% of audit services is to be automated.

Problematization and research gap:

Big Data and Analytics:

In this digital era, approximately 2.5 quintillion bytes of data is created in everyday (Taylor-Sakyi, 2016). The enormity and explosion of data which led to the emergence of Big Data (Beattie & Pratt, 2003). Big Data is a relatively new topic which consist of different kinds of data such as emails, social media, news media, and phone calls and where everything can be recorded, measured and turned into data (Zhang, Yang & Appelbaum, 2015; Cao, Chychyla & Stewart, 2015). The extensive amount of structured and unstructured data that cannot be analysed using orthodox data analysis methods is known as Big Data and the process of extracting meaningful information from data is called Big Data analytics. According to Microsoft (n.d.), the methods, tools, and applications used to collect, process, and derive insights from Big Data is called Big Data Analytics (BDA). Big Data can capture, storage, analysis and visualization of huge volumes of data. Regarding characteristics, Big Data is often defined "4 Vs" in terms of volume, velocity, variety (Cao *et al.*, 2015) and while some argue that veracity also should be included (Zhang *et al.*, 2015).

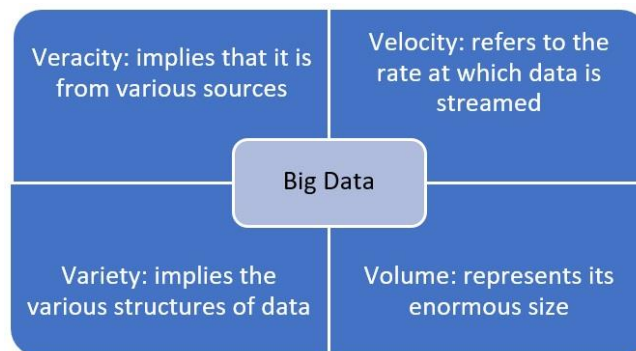


Figure 1. Dimensions of Big Data

As shown in figure 1, Big Data could be structured or unstructured data. Structured data refers to information that is easily stored in a spreadsheet database that is correlated using a common matrix. The other data is unstructured data which are emails, videos, blogs, call center conversations and social media (TechAmerica Foundation, 2012).

Relation between Big Data Analytics and Audit:

According to Alles & Gray (2018), using Big Data, conventional auditing is shifting to digital era to access complete datasets and new additional data capability. Big Data is not only changing how much data is accessible in the audit but it's transforming the traditional image of audit firm also. Research has shown that, using Big Data in audit can enhance and ensure audit quality where traditional process is insufficient (Yoon et al., 2015). There are always prospects and consequence consist with every transformation. There are also some issues to imply Big Data in audit process. But using Big Data in audit firm has much more positive aspects than negative aspects (Cao et al., 2015; Alles & Gray, 2018; Yoon et al., 2015). As previously mentioned, some positive aspects are: enhance and ensure audit quality and cost reduction. Analysis of Big Data can identify fraudulent activities and deliver security. The data are from primary sources and trustworthy, suspicious activities can be identified effortlessly (Janvrin & Watson, 2017).

Auditors can use big data to extend the scope of their projects and make comparisons across bigger data sets. Big data requires automation and the use of artificial intelligence, so it can process data in large quantities and at high speeds, creating valuable insights for auditors. Using big data and data analytics to extract new and important information and patterns from large volume of datasets, both structured and unstructured, to draw new conclusions, strategies, and behavioral implications which can be derived, providing enormous prospects for the profession (Riahi & Riahi, 2018). Audits have benefited from big data analysis in terms of risk assessment. For example, combining Big Data and analytics can aid data mining. Accessing the entire database is a big advantage. This method allows auditors to concentrate on a particular problem area. Auditor can also identify high-risk areas based on strong evidence. As a result, big data analytics assists audits by allowing for a more accurate risk assessment.

In the past decades there were some failures and scandals arise from major audit activities relating Enron, WorldCom, Freddie Mac, Lehman Brothers, etc. After these incidents, the auditing profession has gained much attention and audit quality has been under continuous inquiry and it lead the audit activities to be questioned

by regulators, governments, and investors (Alles & Gray, 2015). As the business environment is changing expeditiously due to the rapid change of technology, the role of auditors in the financial markets is more significant than ever before. Big Data Analysis has provided various chances for auditors' activity in the field of auditing. This involves assessing bankruptcy, detecting management fraud, assessing the risk of an audit engagement, and detecting serious misstatements in financial statements (Cao, et al., 2015). In addition, rather of focusing solely on financial transactional data, Big Data allows auditors to focus on structured, semi-structured, and unstructured data (Alles & Gray, 2015). Instead of the existing traditional sample approach, Big Data Analysis allows to test the entire population (Cao et al., 2015, Richins, 2017).

The primary objective of this study is to investigate the perceptions of auditors in India and Bangladesh towards the implementation of big data analytics in the audit. The choice of India and Bangladesh as the study's focal points not only from their status as developing countries but also from their shared border and close geographic proximity. This enables a comparative analysis that takes into account both commonalities and disparities in the implementation of big data analytics in the audit practices of these nations. By comparing the perception of auditors in both countries towards the implementation of big data analytics in the audit, this study aims to identify factors that contribute to the differences in perception. The findings of this research will provide valuable insights into the challenges and opportunities for improving the adoption of big data analytics in the audit in both countries which will offer practical implications for policymakers, auditors, and stakeholders in these developing economies. Additionally, the study will contribute to the development of best practices for auditors in other developing countries that face similar challenges in adopting new technologies in the audit industry.

Research aim:

The research aim is to explore and compare the perception of auditors in India and Bangladesh towards the implementation of big data analytics in audit.

Research Question:

1. How do auditors in India and Bangladesh perceive the implementation of big data analytics in the audit methodology?
2. What are the differences in perception between these two countries?

Conceptual Framework:

The integration of big data analytics into the audit process has become a topic of increasing interest in recent years due to the potential benefits it offers. The purpose of this literature review is to examine how auditors in India and Bangladesh perceive the implementation of big data analytics in the audit methodology, and to identify any differences in perception between these two countries.

The Technology Acceptance Model (TAM) is a widely used theoretical framework in the field of information systems and technology management. It was first introduced by Fred Davis (1989) as a way to explain and predict users' acceptance and adoption of new information technologies. TAM has since become one of the foundational models for understanding user behavior in relation to technology adoption.

According to Davis (1989), The core concept of the Technology Acceptance Model revolves around the idea that an individual's perceived usefulness and perceived ease of use of a technology are the key determinants of their intention to use and subsequently their actual use of that technology. Here are the main components of TAM:

Perceived Usefulness (PU): Perceived usefulness was defined as “the degree to which an individual believes that using a particular system would enhance his or her job performance” (Davis, 1986, p. 26). The system will make their tasks easier and more efficient. If a person sees a technology as useful, they are more likely to adopt it.

Perceived Ease of Use (PEOU): Perceived ease of use was defined as “the degree to which an individual believes that using a particular system would be free of physical and mental effort” (Davis, 1989, p. 26). Technologies that are perceived as easy to use are more likely to be adopted, as they require less cognitive and physical effort.

The more useful and easier to use an individual perceives a technology to be, the more likely they are to have a positive attitude toward it and intend to use it (Davis et al., 1989). Numerous theoretical frameworks and models exist for examining how individual users adopt and embrace emerging technologies. Surendran (2012)

upholds this model as one of the most favored approaches for predicting the acceptance and utilization of information systems and technology by individual users and the reviewed for examining big data analytics.

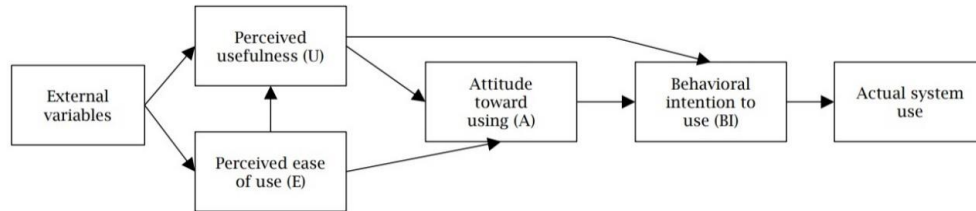


Figure 2. Technology Acceptance Model (TAM)

Source: Davis et al. (1989, p. 985).

In case of Auditing, accepting new information system requires auditors to evaluate the system. Relating to TAM, In this model, perceived usefulness is as the degree to which auditors believe that using Big Data Analytics would increase their performance.

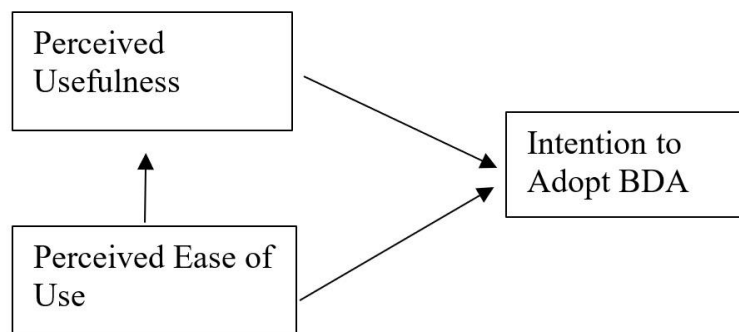


Figure 3. The conceptual framework

When auditors rely on that the Big Data Analytics is useful in their work and can increase their performance, they are likely to use BDA more frequently. According to Venkatesh et al. (2003), perceived usefulness is “the degree to which an individual believes that using the tool will help him or her better attain significant rewards.” Once auditors rely on that Big Data Analytics are easy and free from effort, they are expected to use BDA more which will result in improving their performance. This will lead them to the intention of adopting Big Data Analytics (BDA). Building on the TAM framework, auditors' intention to adopt big data analytics emerges as the outcome of their perceptions of usefulness and ease of use.

Studies such as Li, Wu, and Cao (2017) underscore the connection between positive perceptions of big data analytics and the intention of auditors to incorporate these analytics into their audit processes.

A study by Rose et al. (2017) suggests that the introduction of big data analytics into the audit process can enhance the effectiveness and efficiency of the audit, improve risk assessments, and provide auditors with new insights. Joshi and Marthandan (2018) argue that big data analytics is a game-changer for the audit profession, and its implementation can help auditors to improve the quality of their work and provide more value to clients. Dagilienė and Kloviėnė (2019) suggest that the use of big data analytics in external auditing is motivated by the need to reduce audit risk and improve the quality of audit work.

Appelbaum et al. (2017) argue that there is a lack of research on the use of big data analytics in the audit process, and further studies are needed to determine how it can be effectively implemented. Earley (2015) also points out that there are challenges associated with the implementation of big data analytics in auditing, such as data quality issues, data security concerns, and the need for specialized skills.

Gepp et al. (2018) suggest that the use of big data techniques in auditing research and practice is a current trend that offers many opportunities for the profession. The authors note that the use of big data analytics can help auditors to identify patterns and anomalies in data, detect fraud, and provide more accurate and timely information to clients.

Several studies have explored the adoption and use of big data analytics in auditing in different countries. For instance, a study by Joshi and Marthandan (2018) found that the hype of big data analytics is increasing globally, and auditors are realizing its potential benefits in enhancing audit quality, reducing audit risk, and providing more value to clients. The study also identified challenges related to data privacy and security, data quality, and the need for specialized skills as barriers to the adoption of big data analytics in auditing.

Similarly, a study by Dagilienė and Kloviėnė (2019) investigated the motivation of external auditors to use big data and big data analytics in auditing. The study found

that the main motivations for using big data analytics were to improve audit quality, reduce audit risk, and enhance the efficiency and effectiveness of audit procedures. The authors also noted that there was a lack of knowledge and skills related to big data analytics among auditors, and further education and training were needed.

Research Design:

Method:

A qualitative method tends to be subjective, focuses on the process, interpretive to understand and gain more insights into a social phenomenon (Saunders et al., 2016). The research aim of exploring the perceptions of auditors in India and Bangladesh regarding the implementation of big data analytics in the audit methodology and the differences in their perceptions requires an in-depth understanding of the participants' experiences, opinions, and attitudes. As this is a new and relatively unexplored area, there is limited knowledge or no knowledge about the research phenomenon. There is insufficient empirical data to justify a quantitative method. According to Neuman (2013), exploratory research is conducted, when there is limited knowledge or no knowledge about the research area. Therefore, an exploratory study is required to gain an understanding of the perceptions of the participants.

In addition, completing questionnaires or conducting a survey to gather quantitative data will not be adequate to meet the research goal as there is insufficient empirical data to justify a quantitative method. Furthermore, the researcher's prior knowledge and experience suggest that a qualitative method will be more appropriate in this research. The qualitative method enables the researcher to gather rich and detailed information from the participants, and to gain a deeper understanding of their experiences and perspectives.

Data collection:

According to Hox and Boeije (2005), primary data refers to data collected specifically for a research objective using the most suitable data collection methods for the research problem. In this research, the author requires primary data since it aims to investigate auditors' perceptions regarding skills and future learning. Yin (2016) and Saunders et al. (2016) highlight the significance of interviews as a primary data gathering method in qualitative research. Interviews enable researchers to obtain valid and relevant data to answer research questions. Semi-structured interviews, which are not standardized like structured interviews, allow researchers

to ask "how" questions and maintain thematic discussion during the interview (Saunders et al., 2016).

The author of this paper chose to conduct semi-structured interviews to maintain thematic discussion and ask relevant questions. Bryman & Bell (2011) argue that semi-structured interviews allow interviewees to provide detailed answers and provide researchers with more insight into the research. To ensure reliability, the author constructed an interview guide based on the research topic's thematic discussion, following Saunders et al. (2016) and Bryman & Bell (2011).

Purposive sampling was deemed most suitable for this research, as it allowed the researcher to select participants based on their knowledge of the study (Saunders et al., 2016). Seven chartered accountants were interviewed for this study, three from India and four from Bangladesh. To achieve the research's purpose, data was gathered from auditing firms that use big data tools. Since big data requires significant investment, the author interviewed auditors from big four and mid-tier audit firms in India and Bangladesh. Participants were contacted via LinkedIn, and the snowball effect was used to connect with other participants. All interviews were conducted via Skype and recorded to ensure accuracy and enable the author to review the discussions in detail. Additionally, the interviews were transcribed to facilitate data analysis and maintain the reliability of the findings.

The report involved conducting multiple interviews with a total of seven participants, who were identified and referred to as "R 1", "R2", and so forth. Each interview lasted between 60 to 75 minutes and were recorded with the permission of the participants.

Figure 4 provides additional information about the interviewees.

Respondent	Organization	Year of experience	Country
1	KPMG	10	India
2	KPMG	8	India
3	Deloitte	4	India
4	Syful Shamsul Alam & Co	8	Bangladesh
5	Hoda Vasi Chowdhury & Co	4	Bangladesh
6	Hoda Vasi Chowdhury & Co	10	Bangladesh
7	A. Qasem & Co	6	Bangladesh

Figure 4: Information about the interviewees

Data Analysis:

According to Bryman et al., (2011), to analyze the qualitative data, thematic analysis is one of the most used techniques. King (2004) has established a new technique, which called template analysis. This template analysis to be used for thematic analysis. “The essence of template analysis is that researcher produces a list of codes (‘template’) representing themes identified in their textual data” (King, 2004). According to King (2004) the first step of the template analysis is familiarization with data. Here transcribed interviews were thoroughly read and familiarize with data. Second step is preliminary coding. King (2004) suggested, author should read the transcribed text closely and highlighting the part which is related to research question. To follow this step, here author first identified the portions of the interview which was related to research question. Later code was assigned to it. Here is an example that demonstrates how the coding was executed.

After coding, here author followed the rest of the steps of template analysis (King, 2004) which are clustering, producing initial template and applying the template. The template and the themes has attached in Appendix B.

Ethical aspects:

In Tracy's (2010) research, it was suggested that procedural ethics should be followed to ensure that participants were informed about the conditions of participating in the research. The author of the research ensured that participants were informed that their participation would be voluntary, meaning that they could participate without any pressure or coercion. Participants were also informed that they would be anonymous and their identities would be kept confidential and their data would be stored carefully. The author followed the General Data Protection Regulation (GDPR) and filled out the Ethics self-assessment form for degree projects that involve humans for ethical consideration.

Results and Analysis:

The analysis of the interviews revealed several key themes related to the use of big data analytics in the audit in India and Bangladesh. In this section, we will conduct a comprehensive comparative analysis of the responses provided by auditors from India and Bangladesh.

Comparative Analytical Discussion

By incorporating direct quotes from the respondents, author aim to provide a deeper understanding of the commonalities and distinctions between these two countries in their perceptions of the implementation of big data analytics in audit. The influence of cultural, regulatory, and contextual factors will be explored to discern how these elements shape auditors' viewpoints.

Familiarity and Training:

Auditors from both India and Bangladesh exhibit varying levels of familiarity with big data analytics. R1 from India demonstrates proactive engagement with the concept, having actively sought out information about its potential impact.

R1 ".....I have a good understanding of big data analytics in relation to audit methodology. I've actively sought out information about how this technology can impact our field."

This enthusiasm for knowledge acquisition is also evident in R2, who has diligently followed the advancements of big data analytics. Even R3 has also understanding of big data analytics.

Other hand respondents from Bangladesh R4 has basic understanding and R6 has solid understanding of big data analytics.

In contrast, R5 from Bangladesh acknowledges a more basic awareness of the term. In case of R7 has almost the same. R7 is familiar with the term but did not examine deeply into the technical aspects.

Moreover, Indian respondents has had the privilege of attending specialized workshops and training sessions, providing them with a more practical understanding of big data analytics tools. This variance in exposure signifies a

growing recognition of the significance of this technology in both countries, with India's auditors being better positioned to embrace its practical applications.

Perceived Usefulness:

It is apparent that auditors from both India and Bangladesh recognize the transformative potential of big data analytics in audit practices. Respondents from both countries emphasize the efficiency gains in identifying patterns and anomalies that could be missed through conventional methods. R4 from Bangladesh highlights the technology's ability to provide a comprehensive understanding of financial data, underscoring its role in enhancing audit accuracy.

"..... with the massive amounts of datamanual auditing processes can miss critical insights. Big data tools can help us identify patterns and anomalies that would be otherwise hard to detect....." R4

Additionally, R6 from Bangladesh and R 3 from India converge in recognizing its efficacy in facilitating quicker risk identification.

".....provide a deeper and more holistic view of an organization's financial health."R2

R1 believe that Big data analytics holds immense promise for audits and can enable us to process vast datasets quickly, identify trends, and detect anomalies that might be overlooked using traditional methods. R6 thinks that BDA potential benefits are numerous, including detecting fraud more effectively, identifying trends that might go unnoticed with traditional methods, and providing clients with a deeper understanding of their financial data.

This shared perception underscores the cross-cultural consensus on the substantial benefits that big data analytics can offer to the audit profession.

Ease of Use and Challenges:

Both Indian and Bangladeshi auditors express a blend of optimism and caution when discussing the ease of incorporating big data analytics tools. R2 from India is optimistic, stating that

"well-trained to use these tools effectively.."

However, R6 found that after attending a training session, big data analytics tool to be quite user-friendly and these tools simplify complex data analysis tasks and make it easier to identify patterns and anomalies.

R7 from Bangladesh underscores potential challenges, stating,

".....some tools require coding skills or a good understanding of data manipulation."

This balance between optimism and apprehension suggests a common recognition of the dual nature of integrating technology – with its potential advantages comes the need for adaptation.

Attitudes and Social Influence:

Auditors from both countries share a balanced attitude toward the integration of big data analytics. R1 from India expresses enthusiasm but emphasizes the importance of maintaining a balance:

"It's a remarkable step forward that aligns with rapid technological advancements... However, it's essential to maintain a balance."

Similarly, R6 from Bangladesh states,

"...It's a positive development... but it's important to strike a balance between technology and human judgment."

However, these respondents also share a concern for striking a harmonious equilibrium between technology and the indispensable human judgment that characterizes the auditing profession. Both R1 and R6 emphasize the need to safeguard the critical analytical and interpretive abilities that define auditors' expertise.

Cultural and Contextual Factors:

The influence of cultural factors becomes evident when comparing the perceptions of auditors from India and Bangladesh. Respondents from India, such as R1, highlight the tech-savvy environment prevalent in the country, which likely fosters

greater openness to the adoption of big data analytics. The more advanced technology sector in India potentially contributes to the heightened receptiveness among Indian auditors. On the contrary, Bangladeshi respondents like R7 shed light on a culture that values personal interactions, potentially leading to more resistance to the influx of technology.

"...our culture tends to value human judgment, and incorporating technology might be met with some resistance....."R6

The regulatory and infrastructure discrepancies in Bangladesh could also shape this cautious outlook. These cultural nuances reveal the complex interplay between technology and cultural attitudes, resulting in distinct perceptions. This cultural disparity is a potential factor contributing to variations in receptiveness toward technology.

Intention to Adopt:

Both Indian and Bangladeshi auditors voice a shared interest in adopting big data analytics tools. R2 from India affirms,

".....staying ahead in our field requires us to embrace technological advancements...."

Similarly, R7 from Bangladesh expresses openness, to the idea of adopting big data analytics tools.

"..... staying updated with technological advancements is vital for our profession. It's a logical step to improve efficiency and provide better insights to clients....."R4

All of the auditors from both countries highlighted the necessity of embracing technological advancements to remain competitive in the evolving auditing landscape. Their intention reflects the universal recognition among auditors worldwide that adaptability to technological progress is integral to professional growth. Their intention reflects the universal recognition among auditors worldwide that adaptability to technological progress is integral to professional growth. This common aspiration is expressive of the ongoing transformation of auditing practices globally.

Discussion:

Perceived usefulness (PU):

The perceived usefulness of big data analytics in the audit methodology is a critical factor influencing auditors' acceptance and adoption of this technology. Auditors from both India and Bangladesh acknowledge the potential benefits that big data analytics can offer to their audit practices. Building upon previous literature by Rose et al. (2017), Joshi and Marthandan (2018), and Dagilienė and Kloviėnė (2019), the findings reveal a shared recognition of the transformative potential of big data analytics. Auditors emphasize the efficiency gains in identifying patterns, anomalies, and potential risks that may otherwise be missed using traditional methods. This consensus across countries underscores the universal perception of big data analytics as a tool that can enhance audit quality, risk assessment, and decision-making.

Perceived Ease of Use (PEOU) and Challenges:

In considering the ease of incorporating big data analytics tools, auditors from both India and Bangladesh express a combination of optimism and caution. Drawing from the works of Davis (1989), the findings highlight auditors' perspectives on the user-friendliness of these tools. While some auditors find certain tools to be intuitive and user-friendly, others acknowledge potential challenges, such as the need for coding skills and data manipulation expertise. This duality in perceptions reflects the complex nature of integrating technology into audit processes, where perceived ease of use is contingent upon familiarity and training.

Attitudes and Social Influence:

The attitudes of auditors toward the integration of big data analytics are influenced by both personal and contextual factors. Informed by previous research by Gepp et al. (2018), the comparative analysis reveals a balanced attitude among auditors from both countries. They recognize the potential benefits of big data analytics while emphasizing the importance of maintaining a harmonious balance between technology and human judgment. This attitude resonates with the ongoing

discussions in the literature about the synergy between technological advancements and auditors' analytical expertise.

Cultural and Contextual Factors:

Cultural and contextual factors play a significant role in shaping auditors' perceptions of big data analytics adoption. Integrating insights from previous studies by Joshi and Marthandan (2018) and Dagilienė and Klovienė (2019), the comparative analysis elucidates the impact of cultural attitudes on technology adoption. Indian auditors exhibit greater familiarity with technology due to the tech-savvy environment, fostering openness to innovation. In contrast, Bangladeshi auditors' caution can be attributed to a cultural preference for personal interactions and potential regulatory and infrastructure barriers. This cultural nuance underscores the intricate interplay between technology and cultural attitudes.

Intention to Adopt:

The intention to adopt big data analytics tools emerges as a shared aspiration among auditors from both India and Bangladesh. This intention reflects their understanding that technological adaptation is integral to professional growth, echoing previous research by Joshi and Marthandan (2018) and Dagilienė and Klovienė (2019). Auditors recognize the evolving nature of the audit profession and the need to stay updated with technological advancements to remain competitive and relevant. This consensus highlights the global trend of auditors embracing technology as a means to enhance efficiency and provide valuable insights to clients.

Conclusion:

The integration of big data analytics into the audit process has emerged as a focal point of interest and innovation in recent years. This thesis set out to explore how auditors in India and Bangladesh perceive the implementation of big data analytics in audit methodologies and to identify any differences in perception between the two countries. Employing the Technology Acceptance Model (TAM) as a conceptual framework, this study conducted a comparative analysis of auditors' perceptions, emphasizing the components of perceived usefulness, perceived ease of use, intention to adopt, and their interactions.

The findings of this comparative analysis reveal noteworthy insights into auditors' attitudes toward big data analytics in the audit profession, shedding light on both shared perspectives and country-specific differences. Perceived usefulness emerges as a pivotal factor influencing auditors' positive attitudes, as both Indian and Bangladeshi auditors recognize the technology's potential to enhance efficiency, risk assessment, and audit quality. The consensus on the benefits of big data analytics underscores its cross-cultural applicability in driving positive perceptions.

Furthermore, auditors from both countries express optimism tempered with caution regarding the ease of incorporating big data analytics tools. The recognition of the need for specialized skills and potential coding requirements underscores the importance of training and user-friendly interfaces to facilitate technology adoption. The balance between optimism and challenges highlights the dynamic nature of technology integration in the audit process.

Cultural and contextual factors also come to the forefront, revealing that while both India and Bangladesh recognize the significance of technology, varying cultural values and technological infrastructure influence auditors' perceptions. Indian auditors' familiarity with advanced technology environments makes them more receptive, whereas Bangladeshi auditors value human judgment and personal interactions, potentially impacting their openness to technology adoption. These cultural nuances underscore the multifaceted interplay between technology and cultural attitudes, shaping distinct perceptions.

Despite these differences, both Indian and Bangladeshi auditors share a common intention to adopt big data analytics tools. The mutual understanding that technological advancements are essential for remaining competitive in the evolving

audit landscape highlights the universal recognition of the need for adaptability to progress.

In conclusion, this comparative study provides valuable insights into the perceptions of auditors in India and Bangladesh regarding the implementation of big data analytics in audit methodologies. The findings highlight the shared recognition of technology's potential benefits, the importance of user-friendly interfaces and training, and the complex interaction between cultural attitudes and technology adoption. This study contributes to the understanding of how auditors perceive and intend to adopt big data analytics, providing valuable insights for practitioners, researchers, and policymakers as they navigate the integration of technology in the audit profession.

Future study suggestion:

Based on this study, further research is proposed in the area that investigate the influence of organizational support on auditors' perceptions and intentions to adopt big data analytics. It explore how factors like leadership support and available resources influence auditors' decisions to adopt new technology. This research can reveal how companies can help auditors embrace technology more effectively.

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Appendix A: Interview Guide

Section 1: Demographic Information

1. Please provide some basic demographic information about yourself, such as years of experience as an auditor.

Section 2: Familiarity with Big Data Analytics and Audit Methodology

2. How familiar are you with the concept of big data analytics in the context of audit methodology?

3. Have you had any training or exposure to using big data analytics tools in your audit practices? If yes, please elaborate.

Section 3: Perceived Usefulness of Big Data Analytics

4. In your opinion, how do you think big data analytics can enhance the effectiveness of the audit process?

5. What potential benefits do you associate with the integration of big data analytics into audit methodologies?

Section 4: Perceived Ease of Use of Big Data Analytics

6. How comfortable do you feel using big data analytics tools in your audit work?

7. Are there any challenges or concerns you foresee when it comes to adopting big data analytics in your audit practices?

Section 5: Attitudes Towards Big Data Analytics

8. What are your overall attitudes and feelings towards the integration of big data analytics in audit processes?

9. Do you view big data analytics as a positive or negative development in the field of auditing? Why?

Section 6: Social Influence and Perceptions

10. Have you discussed the use of big data analytics in audit methodology with colleagues or peers? If yes, what were their opinions and perceptions?

11. To what extent do you believe that the opinions of others (e.g., colleagues, superiors) influence your perception of using big data analytics in audits?

Section 7: Comparing Perceptions between India and Bangladesh

12. In your view, are there any cultural, regulatory, or contextual differences between India and Bangladesh that might influence how auditors perceive the implementation of big data analytics in audits?

13. How do you think auditors' perceptions of big data analytics differ between India and Bangladesh? Please elaborate.

Section 8: Intention to Adopt Big Data Analytics

14. Would you consider incorporating big data analytics tools into your audit methodology in the future? Why or why not?

15. What factors would influence your decision to actually adopt big data analytics in your audit practices?

Section 9: Additional Comments

16. Is there anything else you would like to share regarding the implementation of big data analytics in audit methodologies or any aspects not covered in the previous questions?

Appendix B: Data Analysis

Section 1: Demographic Information

- Theme: Demographic Profile
- Code: Years of Experience

Section 2: Familiarity with Big Data Analytics and Audit Methodology

- Theme: Familiarity with Big Data Analytics
- Code: Understanding of Big Data Analytics
- Theme: Training and Exposure
- Code: Training in Big Data Analytics Tools

Section 3: Perceived Usefulness of Big Data Analytics

- Theme: Potential of Big Data Analytics
- Code: Enhancing Audit Process
- Theme: Benefits of Integration
- Code: Faster Risk Identification, Better Fraud Detection, Enhanced Accuracy

Section 4: Perceived Ease of Use of Big Data Analytics

- Theme: Ease of Use of Big Data Analytics
- Code: User-Friendliness of Tools
- Theme: Challenges and Concerns
- Code: Initial Learning Curve, Data Security and Privacy

Section 5: Attitudes Towards Big Data Analytics

- Theme: Attitudes towards Big Data Analytics
- Code: Enthusiasm for Integration
- Theme: Balance with Human Judgment
- Code: Importance of Human Touch

Section 6: Social Influence and Perceptions

- Theme: Social Influence and Discussions
- Code: Colleague Opinions and Discussions
- Theme: Influence on Perceptions
- Code: Role of Colleague Opinions

Section 7: Comparing Perceptions between India and Bangladesh

- Theme: Cross-Country Comparison
- Code: Cultural and Regulatory Differences

- Theme: Perceptions of Differences
- Code: Infrastructure and Regulatory Frameworks

Section 8: Intention to Adopt Big Data Analytics

- Theme: Intention to Adopt
- Code: Interest in Adoption
- Theme: Factors Influencing Adoption
- Code: Integration, Learning, Audit Improvement

Section 9: Additional Comments

- Theme: Additional Comments
- Code: Need for Comprehensive Training