

BLOCKCHAIN TECHNOLOGY BASED FUTURISTIC ACCOUNTING: AN OPINION SURVEY

Gourav Surana ^{#1}, Prof. Shurveer S. Bhanawat ^{*2},

[#] Junior Research Fellow, Department of Accountancy and Business Statistics, Mohanlal Sukhadia University, Udaipur.

^{*} Professor, Department of Accountancy and Business Statistics, Mohanlal Sukhadia University, Udaipur

Email:

¹ gouravsurana7@gmail.com

² shurveer@gmail.com

Abstract— This paper looks at the disruption in the field of accounting caused by emerging technologies such as Blockchain technology(BT), by analyzing the role of BT in accounting. Do accounting professionals aware of these technologies and their socio-economic impact? What are the advantages and challenges to adopt these technologies in accounting? To explore the possible answers to these questions, the present research analysis has been made out after collecting data through the opinion survey method. For data analysis descriptive statistics and ‘One-Sample t-test’ has been used. For testing the reliability of collected data through opinion survey Cronbach’s Alpha reliability test has been conducted. The study concluded that accounting professions are aware of these technologies. Results also show that BT makes real-time accounting possible soon. This technology may be enhanced monopoly of the big corporation as per survey results. The perceived mind-set of accounting professionals may become a big challenge to adopt BT in accounting.

Keywords—Disruptive Technologies, Blockchain Technology (BT), Accounting and Auditing, Socio-economic impacts, Benefits, and Barriers.

I. INTRODUCTION

Blockchain Technology (BT)¹ is treated as the key drivers of accounting technological innovation today (Kokina, Mancha & Pachamanova, 2017; Watson & Mishler, 2017; Johansen, 2018; Saberi et.al., 2019). Technological innovation introducing radical shifts in every aspect of our life and predicated to big contributors to the global economy (Kemp, 1994; El-Hussein & Cronje, 2010). This technology has its advantage and disadvantages. BT fundamentally reshape how we live, work, and interact (Dinh & Thai, 2018). According to KPMG’s 2018 U.S. CEO Outlook, CEOs are thinking a lot about technology, data, and analytics (D&A) for their organizations. It’s fair to say that cloud computing, AI, and blockchain are three frequently discussed technologies that are often predicted to have a great impact (Niranjanamurthy, Nithya & Jagannatha, 2018; Zhao, Li & Yao, 2019). Together, these technologies offer on-demand sharing of information, automation of certain tasks, the ability to detect potentially risky business transactions, and the identification of regulated transactions and business issues (Jarczyk, 2019). Blockchain is the one of above-discussed technology that affects every sector of the economy but when we are talking about the accounting and auditing industry it may be disrupted due to the features of these technologies (Peters & Panayi, 2016; Aste, Tasca & Di Matteo, 2017).

The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value (Tapscott & Tapscott, 2018). In blockchain technology, we have a chain of blocks where each block contains a digital signature, timestamp, and relevant information, is then broadcasted to all nodes in the distributed network, it is cryptographically secure and immutable. Blockchain has the potential to enhance the effectiveness of the accounting profession by reducing the costs of maintaining & reconciling ledgers, providing absolute certainty over the ownership and history of assets.

Blockchain could help accountants gain clarity over the available resources and obligations of their organizations, and also free up resources to concentrate on planning and valuation, rather than recordkeeping. (Böhme et.al., 2015; Wright & De Filippi, 2015; Thakker, 2018).

To better understand the role of BT an intensive review of the literature has been made. Nakamoto (2008) gives a purely peer to peer version of electronic cash that would allow online payments to be sent directly from one party to another without going through a financial institution. They started with the usual framework of coins made from digital signatures, which provides strong control of ownership, but it is incomplete without a way to prevent double-spending. So they proposed a solution to the double-spending using a peer to peer network. The network timestamps the transactions by hashing them into an ongoing chain of hash-based proof of work, these records cannot be changed without redoing the proof of work. According to Kokina et al. (2017), Blockchain is known as a distributed ledger technology assured to transform the accounting practice. In this paper, they give an initial examination of the technology itself and discuss the associated opportunities and limitations. They also give an overview of the current blockchain-related practices in large accounting firms and trace significant milestone in this technology's emergence. Carlin (2018) argued that this is a missed opportunity. The maturation of blockchain technology may represent as profound a shift in accounting as the emergence and adoption of double-entry accounting (Carlin, 2019; Karajovic et.al., 2019).

While the rise to prominence of double-entry occurred gradually over many centuries, it seems impossible to believe that this will hold in the case of a shift towards triple-entry³ if the promise of blockchain technology approaches the reality of its transformative potential. The objectives of the paper include an examination of the futuristic role of Blockchain Technology in Accounting, study the awareness of accounting professionals about Blockchain Technology based Accounting and Auditing, and to identify socio-economic impacts, benefits, and barriers in adopting Blockchain Technology based Accounting and Auditing.

II. REVIEW OF LITERATURE

Blockchain Technology is considered the most disruptive technology⁴ at present (Kokina, Mancha & Pachamanova, 2017; Johansen, 2018;). Blockchain can be understood as a digital, immutable, distributed ledger that chronologically records transactions in real-time (Watson & Mishler, 2017; Saberi et.al., 2019). Blockchain is frequently referred to as the Internet of money (Kemp, 1994; El-Hussein & Cronje, 2010; Dinh & Thai, 2018). The first implementation of Blockchain Technology is the preminent cryptocurrency 'Bitcoin'. Cryptocurrencies allow people to store their money securely and make payments without intermediaries such as banks. This renders money transfers and purchases much simpler faster and cheaper. So blockchain provides a great infrastructure for monetary systems (Niranjanamurthy, Nithya & Jagannatha, 2018; Zhao, Li & Yao, 2019). In other words, you can store and move money on it efficiently. This use case can be extended further to include all kinds of financial assets, stocks, bonds, derivatives, commodities, and real estate can all be managed and transacted much more efficiently on blockchains compared to traditional systems (Peters & Panayi, 2016; Aste, Tasca & Di Matteo, 2017; Jarczyk, 2019). Another great implementation of Blockchain Technology is in supply chain management (Francisco, & Swanson, 2018; Saberi et.al., 2019). Many companies are already actively developing blockchain solutions to monitor logistics in real-time to track and verify the origin of goods entering their supply chains and the conditions they are kept in (Böhme et.al., 2015; Wright & De Filippi, 2015; Thakker, 2018).

This can help certify the origin and lifecycle of products. Build trust in the system, prevent fraud, and improve outcomes for both suppliers and consumers (Tapscott & Tapscott, 2018). The authenticity verification feature of blockchain is so important that we shall follow up with some more specific examples. Let's talk about luxury goods (Nakamoto, 2008; Kokina, Mancha, & Pachamanova, 2017). Diamonds are forever right and so being blockchain diamonds. Works of art and other items of high value are among the first areas where blockchain projects are innovating to provide transparency, security, and trust. Of course bringing such efficiencies to the luxury goods market can unlock a lot of value by reducing counterfeiting and promoting higher ethical standards (Carlin, 2018; Carlin, 2019; Karajovic et.al., 2019). This is a very exciting innovation. Another application of the secure registry features a blockchain is in intellectual property a time-stamped record on a blockchain could register any kind of copyrights patents or trademarks (Mainelli & Smith, 2015; Gürkaynak et.al.,2018; Savelyev, 2018). So we can use blockchain to verify the authenticity of pretty much any asset. Digital identity is another huge area of application for blockchain. The idea to use blockchain database and infrastructure for accounting purposes stems from the nature of blockchain being a ledger for bitcoin transactions which means that it is an actual accounting system serving to write, store and publish the transactions data occurred in bitcoin (Kemp, 1994; El-Hussein & Cronje, 2010; Niranjanamurthy, Nithya & Jagannatha, 2018). Since blockchain can hold currency transactions without any trusted third party intermediary, note that currency transferring is one of the most heavily regulated areas of financial relationship, it can, in the same way, hold transactions of any type of property such as shares, bonds, mortgage, etc (Kemp, 1994; Dinh & Thai, 2018). Accounting professionals are broadly concerned with the measurement, communication of financial information, and the analysis of said information. Much of the Accounting professional is concerned with ascertaining or measuring rights and obligations over property or planning how to best allocate financial resources (Peters & Panayi, 2016; Tapscott & Tapscott, 2018; Thakker, 2018). For accountants, using Blockchain Technology provides clarity over the available financial resources and obligations of their organizations and to utilize available resources, concentrate on planning and valuation rather than recordkeeping. This technology has the potential to enrich the accounting profession by reducing the cost of maintaining & reconciling the accounting ledgers (Kokina, Mancha, & Pachamanova, 2017; Francisco & Swanson, 2018). BT is providing authenticity over the ownership and history of assets (Crosby et.al., 2016; McConaghyet.al., 2017; Ølnes et.al., 2017).

III. RESEARCH METHODOLOGY

To carrying out present research work about BT based accounting, the opinion of respondents have been obtained through an online opinion survey method. We got 70 (out of 150) responses from respondents, all belonging to various accounting professions i.e. Chartered Accountants (CA), Academician, Research scholar, and other. For data analysis, descriptive statistics have been administered. For testing of the consistency and reliability of opinion, the coefficient of variance (C.V.) and 'Cronbach's Alpha' have been used respectively. **'One-Sample t-test'** has been administered for testing of hypothesis. The email and social media like 'WhatsApp' are used to conduct the survey. A request was also made to respondents to further pass the opinion survey questionnaire to their contacts so that the scope of study maybe expand. The questionnaire used in the opinion survey is broken up into two distinct sections-

A. *Demographic feedback* – Questions involving queries of age, gender, profession.

B. *Blockchain Technology* – In this part of opinion survey questions regarding knowledge and awareness of blockchain technology in the accounting profession are included.

C. *Hypotheses*

1. $H_{1(a)}$: There is a significant difference in the views of respondents regarding technological innovation, its impact, and familiarity with BT.
2. $H_{1(b)}$: There are a significant difference respondents' views about socio-economic impacts, benefits, and barriers to accepting Blockchain Technology in Accounting and Auditing industry.

IV. DATA ANALYSIS

TABLE-1
DEMOGRAPHICAL PROFILE

Age		
	Frequency	Percent
Between 20 to 30	51	72.9
Between 31 to 40	14	20.0
Between 41 to 50	4	5.7
Between 51 to 60	1	1.4
Total	70	100.0
Gender		
Male	34	48.6
Female	36	51.4
Total	70	100.0
Profession		
CA	18	25.7
Academician	18	25.7
Research scholar	30	42.9
Others	4	5.7
Total	70	100.0

Demographic Feedback

Demographic related questions have been asked in the opinion survey. Age, gender, and profession. There is a majority of respondents (93%) spread of ages between 20 to 40 years, with a small handful outside this range. Most respondents (73%) came from the 20-30 years' age group. & Almost both male (49%) and female (51%) respondents have participated equally in this survey. The composition of respondents 'Research Scholar' (43%), 'CA' (26%), 'Academician' (26%), and 'other' (5%) have participated in this survey. The graphical presentation of Age, Gender, and Profession showed in the table above.

The responses from the respondents regarding their familiarity with Blockchain technology revealed that respondents are significantly considering this technology and have significant disruptive potential as was seen in the review of the literature. As per the first objective to analyze the acceptance of respondent's regarding the technological innovation, its impact and familiarity of BT the views gathered and to test the differences in the perception following hypothesis were made:

H1(a): There is a significant difference in the views of respondents regarding technological innovation, its impact, and familiarity with BT.

To test the above hypothesis, a one-sample t-test was being used with SPSS-19 software. The results were provided in table 2 as under:

Table-2: One-sample t-test
The opinion of respondents about Disruptive Technology

One-Sample Statistics						
	N	Mean	Std. Deviation	Std. Error Mean		
Accep_tech_innov	70	4.1143	1.01500	.12132		
Tech_impac_Acc	70	3.8714	.96190	.11497		
Familiar_BT	70	2.5000	.89685	.10719		

One-Sample Test						
Test Value = 2.50						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Accep_tech_innov	13.059	69	.000	1.58429	1.3423	1.8263
Tech_impac_Acc	11.668	69	.000	1.34143	1.1121	1.5708
Familiar_BT	-.280	69	.780	-.03000	-.2438	.1838

Source: Compiled by Researcher

The output of the 'one-sample t-test' in table-2, reveals that a significant gap exists between the hypothesized test value with the calculated sample statistics for the accepting the technological advancement and technology impact over the accounting (as $p < 0.05$) at 5% level of significance. Further for the familiarity of BT technology the respondents have exhibited a fair amount of agreement that they are not aware ($p > 0.05$) as an insignificant negative gap has been observed as t (Mean difference) = -0.28). Hence it reveals that the responses are in favour that they are aware of technological innovation and its impact but BT is not familiar to all of them. Further the respondents were aware of the specific disruptive technologies in accounting is also measured. It is clear from one sample t-test that somewhere people have heard about these disruptive technologies.

Further as per the objective to analyze the differences in the opinion of respondents for socio-economic impacts, benefits, and barriers to accepting Blockchain Technology in the accounting and auditing industry. Their views were gathered and to test the differences in the perception following hypothesis were made:

H_{1(b)}: There are a significant difference respondents' views about socio-economic impacts, benefits, and barriers to accepting Blockchain Technology in Accounting and Auditing industry.

To test the above hypothesis, a one-sample t-test was being used with SPSS-19 software. The results were provided in table 3 as under:

Table-3
One-sample t-test
One-Sample Statistics

Variable	SPSS code	N	Mean	Std. Deviation	Std. Error Mean
Loss of Jobs	Soci_Eco_1	70	3.1571	1.05824	.12648
Increased growth of wealth inequality	Soci_Eco_2	70	3.2714	1.04841	.12531
Offshoring of local jobs	Soci_Eco_3	70	3.4429	.84503	.10100
Enhance the monopoly of big corporations	Soci_Eco_4	70	3.6286	1.05186	.12572
Lack of Skill and training for a new type of accounting job	Soci_Eco_5	70	3.5143	1.05971	.12666
Real-time accounting and auditing	Ben_tech_inn_1	70	3.7714	.99523	.11895
Providing new opportunities to accounting professional	Ben_tech_inn_2	70	3.7714	.87097	.10410
Enhance the authenticity of accounting records	Ben_tech_inn_3	70	3.8000	1.02999	.12311
More efficient accounting and auditing	Ben_tech_inn_4	70	3.6000	.89118	.10652
Enhance transparency in accounting records	Ben_tech_inn_5	70	3.9143	.89674	.10718
Minimize accounting and auditing cost	Ben_tech_inn_6	70	3.4429	.94233	.11263
People have more control over their own personal data/records	Ben_tech_inn_7	70	3.8857	1.01500	.12132
Lack of trust	Barriers_BT_1	70	3.4000	1.05501	.12610
Perceived data security	Barriers_BT_2	70	3.6143	1.03969	.12427
Lack of compatibility with the existing system	Barriers_BT_3	70	3.6429	1.04999	.12550
Lack of inter-operability with / between third parties providing services	Barriers_BT_4	70	3.3429	.96137	.11491
Perceived mind-set of Accounting and Auditing Professionals	Barriers_BT_5	70	3.6143	.83913	.10030
Fear of job loss	Barriers_BT_6	70	3.4429	1.17505	.14045
Lack of technical skills and training	Barriers_BT_7	70	3.6571	1.15327	.13784

One-Sample Test						
	Test Value = 3.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Soci_Eco_1	-2.711	69	.008	-.34286	-.5952	-.0905
Soci_Eco_2	-1.824	69	.072	-.22857	-.4786	.0214
Soci_Eco_3	-.566	69	.573	-.05714	-.2586	.1443
Soci_Eco_4	1.023	69	.310	.12857	-.1222	.3794
Soci_Eco_5	.113	69	.911	.01429	-.2384	.2670
Ben_tech_inn_1	2.282	69	.026	.27143	.0341	.5087
Ben_tech_inn_2	2.607	69	.011	.27143	.0638	.4791
Ben_tech_inn_3	2.437	69	.017	.30000	.0544	.5456
Ben_tech_inn_4	.939	69	.351	.10000	-.1125	.3125
Ben_tech_inn_5	3.865	69	.000	.41429	.2005	.6281
Ben_tech_inn_6	-.507	69	.614	-.05714	-.2818	.1675
Ben_tech_inn_7	3.179	69	.002	.38571	.1437	.6277
Barriers_BT_1	-.793	69	.430	-.10000	-.3516	.1516
Barriers_BT_2	.920	69	.361	.11429	-.1336	.3622
Barriers_BT_3	1.138	69	.259	.14286	-.1075	.3932
Barriers_BT_4	-1.368	69	.176	-.15714	-.3864	.0721
Barriers_BT_5	1.139	69	.258	.11429	-.0858	.3144
Barriers_BT_6	-.407	69	.685	-.05714	-.3373	.2230
Barriers_BT_7	1.140	69	.258	.15714	-.1178	.4321

The output of the 'one-sample t-test' in the table 3 reveals that significant gap exists between the hypothesized test value with the calculated sample statistics for Loosing of Jobs (Soci_Eco_1); innovation regarding Real-time accounting and auditing (Ben_tech_inn_1), Providing new opportunities to accounting professional (Ben_tech_inn_2), Enhance authenticity of accounting records (Ben_tech_inn_3),

Enhance transparency in accounting records (Ben_tech_inn_5), People have more control over their data/records (Ben_tech_inn_7) (as $p < 0.05$) at 5% level of significance. The respondents have exhibited a fair amount of agreement that socio-economic impact and benefits for the Accounting and Auditing industry are there with the adoption of the technology but the insignificant differences were found for barriers to accepting of Blockchain Technology in accounting and auditing industry.

Figure 1 shows that respondents (58%) believe that BT disrupt the accounting and auditing industry within 5 to 10 years.

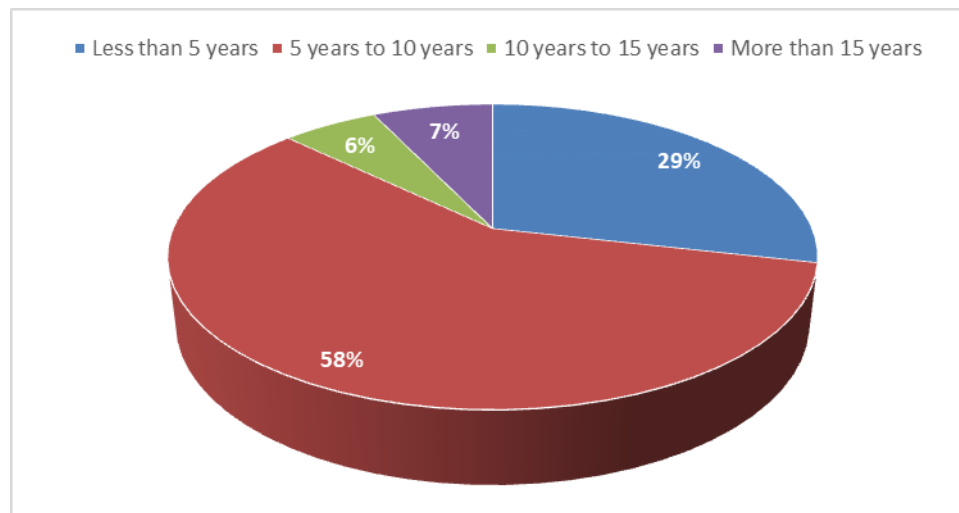


Figure 1 – When will be this technology disrupt accounting and auditing industry

V. CONCLUSION

In the computerized era of accounting, the adoption of disruptive technologies like BT is very essential. For effective utilization of these technologies, accounting professionals must be familiar with these technologies. It is found that blockchain technology plays an important role in accounting. Results also conclude that accounting professional believes these technologies disrupt the accounting profession but they don't know how these technologies disrupt the accounting profession due to the lack of technical skills. It further shows that BT technology has socio-economic impact and benefits for the Accounting and Auditing industry with the adoption of the technology but it has insignificant differences for barriers to accepting Blockchain Technology in the accounting and auditing industry. The biggest advantage of BT is that it may make real-time accounting possible. Results indicate that this technology may disrupt the accounting and auditing industry within 5 to 10 years.

REFERENCES

- [1] Kokina, J., Mancha, R., & Pachamanova, D. (2017). Blockchain: Emergent industry adoption and implications for accounting. *Journal of Emerging Technologies in Accounting*, 14(2), 91-100.
- [2] Watson, L. A., & Mishler, C. (2017). Get ready for blockchain: should management accountants add blockchain technology to their professional vocabulary? *Strategic Finance*, 98(7), 62-64.
- [3] Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain technology and its relationships to sustainable supply chain management. *International Journal of Production Research*, 57(7), 2117-2135.
- [4] Kemp, R. (1994). Technology and the transition to environmental sustainability: the problem of technological regime shifts. *Futures*, 26(10), 1023-1046.
- [5] El-Hussein, M. O. M., & Cronje, J. C. (2010). Defining mobile learning in the higher education landscape. *Journal of Educational Technology & Society*, 13(3), 12-21.

- [6] Johansen, S. K. (2018). A comprehensive literature review on the Blockchain as a technological enabler for innovation. Dept. of Information Systems, Mannheim University.
- [7] Zhao, S., Li, S., & Yao, Y. (2019). Blockchain enabled industrial Internet of Things technology. *IEEE Transactions on Computational Social Systems*, 6(6), 1442-1453.
- [8] Niranjnamurthy, M., Nithya, B. N., & Jagannatha, S. (2018). Analysis of Blockchain technology: pros, cons and SWOT. *Cluster Computing*, 1-15.
- [9] Peters, G. W., & Panayi, E. (2016). Understanding modern banking ledgers through blockchain technologies: Future of transaction processing and smart contracts on the internet of money. In *Banking beyond banks and money* (pp. 239-278). Springer, Cham.
- [10] Aste, T., Tasca, P., & Di Matteo, T. (2017). Blockchain technologies: The foreseeable impact on society and industry. *Computer*, 50(9), 18-28.
- [11] Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). Bitcoin: Economics, technology, and governance. *Journal of Economic Perspectives*, 29(2), 213-38.
- [12] Wright, A., & De Filippi, P. (2015). Decentralized blockchain technology and the rise of lex cryptographia. Available at SSRN 2580664.
- [13] Thakker, M. (2018). Blockchain: A Foundational Change In Financial Records (No. 2018-28-14).
- [14] Carlin, T. (2019). Blockchain and the Journey Beyond Double Entry. *Australian Accounting Review*, 29(2), 305-311.
- [15] Karajovic, M., Kim, H. M., & Laskowski, M. (2019). Thinking outside the block: Projected phases of blockchain integration in the accounting industry. *Australian Accounting Review*, 29(2), 319-330.
- [16] McConaghy, M., McMullen, G., Parry, G., McConaghy, T., & Holtzman, D. (2017). Visibility and digital art: blockchain as an ownership layer on the Internet. *Strategic Change*, 26(5), 461-470.
- [17] Ølnes, S., Ubacht, J., & Janssen, M. (2017). Blockchain in Government: Benefits and implications of distributed ledger technology for information sharing.
- [18] Crosby, M., Pattanayak, P., Verma, S., & Kalyanaraman, V. (2016). Blockchain technology: Beyond bitcoin. *Applied Innovation*, 2(6-10), 71.
- [19] Saberi S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain technology and its relationships to sustainable supply chain management. *International Journal of Production Research*, 57(7), 2117-2135.
- [20] Francisco, K., & Swanson, D. (2018). The supply chain has no clothes: Technology adoption of blockchain for supply chain transparency. *Logistics*, 2(1), 2.
- [21] Mainelli, M., & Smith, M. (2015). Sharing ledgers for sharing economies: an exploration of mutual distributed ledgers (aka blockchain technology). *Journal of Financial Perspectives*, 3(3).
- [22] Gürkaynak, G., Y?lmaz, I., Ye?ilaltay, B., & Bengi, B. (2018). Intellectual property law and practice in the blockchain realm. *Computer Law & Security Review*, 34(4), 847-862.
- [23] Savelyev, A. (2018). Copyright in the blockchain era: Promises and challenges. *Computer law & security review*, 34(3), 550-561.
- [24] Carlin, T. (2018). Blockchain and the journey beyond double entry. *Australian Accounting Review*, 0(0). doi:10.1111/auar.12273
- [25] Dinh, T. N., & Thai, M. T. (2018). AI and Blockchain: A disruptive integration. *IEEE*, 48 - 53. Retrieved September 2019
- [26] Greenman, C. (2017, March 16). Exploring the impact of artificial intelligence on the accounting profession. *Journal of Research in Business, Economics and Management (JRBEM)*, 8(3). Retrieved September 16, 2019, from <http://scitecresearch.com/journals/index.php/jrbem/article/view/1063>
- [27] Jarczyk, D. (2019, March 13). <https://www.accountingtoday.com/opinion/cloud-ai-and-blockchain-are-transforming-accounting>. Retrieved September 2019, from www.accountingtoday.com.
- [28] Jariwala, B. (2015, June 1). <https://www.ifac.org/global-knowledge-gateway/finance-leadership-development/discussion/exploring-artificial-intelligence>. Retrieved September 13, 2019, from www.ifac.org.
- [29] Joshua G. Coyne, P. L. (2017). Can Blockchain Serve an Accounting Purpose? *Journal of emerging technologies in accounting*, 14(2), 101-111. doi:10.2308/jeta-51910
- [30] Kokina, J., Mancha, R., & Pachamanova, D. (2017). Blockchain: Emergent industry adoption and implications for accounting. *Journal of emerging technologies in accounting*, 14, 91-100. doi:10.2308/jeta-51911
- [31] Nakamoto, S. (2008). Bitcoin: A peer to peer electronic cash system. Retrieved 2018, from [bitcoin: https://bitcoin.org](https://bitcoin.org)
- [32] Press, G. (2016, December 30). <https://www.forbes.com/sites/gilpress/2016/12/30/a-very-short-history-of-artificial-intelligence-ai/#47885af06fba>. Retrieved from www.forbes.com.
- [33] Tapscott, D., & Tapscott, A. (2018). *Blockchain revolution*. Penguin. Retrieved September 13, 2019

End Notes

- 1 Blockchain technology - Blockchain is a shared, distributed ledger that can be used to keep accurate, validated, immutable and safety encrypted record of any asset that can be digitized.
- 2 The theory and development of a computer system able to perform tasks normally requiring human intelligence such as visual perception, speech recognition, decision -making and translation between languages
- 3 In 2005, Ian Grigg has given a new concept of accounting which is called Triple Entry Accounting.
- 4 The term 'Disruptive Technology' refers to the development and implementation of technology that has a disrupting effect, often negative, on existing products & services being provided by companies or individuals.