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An Information Systems Perspective on Digital Currencies: A Systematic Literature Review

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Abstract

Digital currency (DC) is gaining public and research attention as an alternative paradigm of currency, its value, and exchange. Because of the growing DC research in the Information Systems (IS) domain, it is necessary to appraise existing DC research coverage and identify areas for future exploration. This article offers an up to date review of IS research on digital currencies. It synthesises the locus and focus of issues, theories, methods, and findings and provides direction for future research. The study uses a systematic literature review method to examine IS articles published between 2010 and 2016. The review identified twenty articles in highly ranked IS journals and conferences. Based on results of our investigation, we chart out end-user, organisation, and systems related future research directions.

Keywords: Digital Currency, Cryptocurrencies, Systematic Literature Review

1. Introduction

For decades, attempts have been made to use innovations in IS and technology to move the global economy from a mainly cash-base to a more cashless society (Wonglimpiyarat 2015). Various information systems solutions have continued to provide innovative platforms to store and transfer money (Kazan et al. 2015) ushering in the development of digital currencies (Ingram et al. 2015). Digital Currency (DC) is an online medium of payment that contrast significantly from earlier known payment mediums especially those that require physical payment mediums such as cash and cheques (Pîrjan et al. 2015). Much of the DC focus from both academic and practitioners has been on cryptocurrencies (CC). Therefore, this study focuses on cryptocurrencies.

CC are a form of digital currency that use cryptographic algorithms to ensure digital money supply as well as virtual security and control platforms to transact digital money (Kazan et al. 2015; Morisse 2015). The most notable and widely used example of cryptocurrencies is Bitcoin, which uses a distributed cryptographic algorithm known as Blockchain.

Bitcoin continues to witness increased attention, but remains considerably difficult to accept and understand (Van Alstyne 2014). CC such as Bitcoin has been widely discussed to have distinctively new ways for performing monetary transaction (Pîrjan et al. 2015). However, the impact of the system on the society continues to unfold (Glaser and Bezzenberger 2015). This poses the need to understand the current state of information systems DC research to identify critical knowledge issues that have not been covered by reviewing existing IS literature. The following questions form the basis for the review:

RQ1. How much DC research has been published in leading IS outlets since 2010?
RQ2. What topics and issues have been addressed?
RQ3. What theories and methods have been used?
RQ4. What are the potential future researches on DC?

The remaining parts of the study are structured into four sections. Section 2- method, Section 3 - results, Section 4 - findings, and Section 5 - summary, discussion of future research opportunities and limitations.

2. Research Method

This study is based on a systematic literature review (SLR), which is a way of identifying, evaluating and interpreting available research relevant to a topic area, or phenomenon of interest (Kitchenham 2004). We followed two main steps, which is searching and screening, to identify the articles for the review. The steps were followed to determine the current state-of-the-art in DC from generally accepted source of IS knowledge.

2.1. Searching

The searching stage involved decisions regarding the searching period, source of literature, search terms definition and literature collection. We restricted the searching period to cover seven years (2010 to 2016) to guarantee sufficient timeframe coverage of literature. 2010 was chosen as the starting year because the most popular crypto-currency- bitcoin- was launched in 2009. The source of the literature was delimited to be (a) Australian Business Deans Council (ABDC)/Australian Council of Professors and Heads of Information Systems (ACPHIS) A*/A ranked IS journals (total of 53 Journals), and (b) ACPHIS recommended conferences (total of 21 conferences). The purpose of restricting the review to highly ranked journals and ACPHIS recommended conferences is because they are representative of high-quality knowledge in IS research (Webster and Watson 2002).

We define our search terms “digital currency,” “cryptocurrencies,” “crypto AND currencies,” “bitcoin,” “block AND chain” and “Blockchain. The search terms were aimed at ensuring holistic coverage in the subject area. To collect the literature, the following searching steps were followed:

i. Search ABDC/ ACPHIS A* ranked IS journals between the years 2010 to 2016 using the search terms (total of 13 journals searched)

ii. Search ABDC/ ACPHIS A ranked IS Journals between the years 2010 to 2016 using the search terms (total of 40 journals searched)

iii. Search Google Scholar between the years 2010 to 2016 using the search terms to identify articles published in ACPHIS recommended IS conferences (total of 920 hits, with 74 conferences papers)

2.2. Screening

Initially, a total of eighty-one (81) publications were found. This included seven (7) publications from IS journals and seventy-four (74) conference papers. Further screening was necessary to ensure that only relevant studies were included. To be included, the publications had to meet the following criteria:

i. The phrases of at least one of the search terms should be included in the heading, keywords or abstract of the paper. One of the IS journals publications did not meet this criterion. Therefore, the paper was excluded.

ii. Conferences papers should be published in the ACPHIS recommended list. This process excluded sixty (60) papers, therefore resulting to a total of fourteen conference publications.

Table 1 provides an overview of the outcome of the search.

Search Source	Search Term	Number of Papers	Relevant Papers	References
Group of IS A* Journals	Search (2010 to 2016) for "digital currency" or "cryptocurrencies" or crypto AND currencies or bitcoin or Blockchain or block AND chain	0	0	N/A
Group of IS A Journals	Search (2010 to 2016) for "digital currency" or "cryptocurrencies" or crypto AND currencies or bitcoin or Blockchain or block AND chain	7	6	(Andrychowicz et al. 2016; Cusumano 2014; Meiklejohn et al. 2016; Polasik et al. 2016; Van Alstyne 2014; Zohar 2015)
Google Scholar (Conferences)	Search (2010 to 2016) for "digital currency" or "cryptocurrencies" or crypto AND currencies or bitcoin or Blockchain or block AND chain	74	14	(Connolly and Kick 2015; Georgoula et al. 2015; Glaser and Bezzenberger 2015; Glaser et al. 2014; Hayes 2015; Hur et al. 2015; Ingram and Morisse 2016; Ingram et al. 2015; Kazan et al. 2015; Lustig and Nardi 2015; Mai et al. 2015; Morisse 2015; Tomaš and Švogor 2015; Zarifis et al. 2015)
Total		***81***	***20***	

Table 1. *Selection of Journals and Conferences*

3. Results

This section presents results to answer the research questions.

3.1. How much digital currency research has been published in IS outlets since 2010?

We identified twenty articles of which three (3) were published in 2014, thirteen (13) in 2015, and four (4) in 2016. However, there is still possibility of the 2016 figure to increase as there are still various conferences and journals publications expected from the IS research community. Based on these results, it is evident that DC research has continued to increase over the years of study. The IS outlets that published DC research are summarized in Table 3. None of the twenty were published in A* ranked IS journals. There has however been six publications in A ranked journals. The Communications of the ACM has published five papers, while the International Journal of Electronic

Commerce has published one. 11 articles were published in generic conferences while three were from specialised papers. See Table 2. The results suggest that DC is an emerging field of research in information systems and IS research has yet to make significant, rigorous and impactful contributions worth publishing in its leading outlets.

Author	Digital Currency Covered	Source of Publication	Journal/ Conference Ranking	Country of Authors' Affiliate
(Andrychowicz et al. 2016)	Bitcoin	Communications of the ACM	A Journal	Poland
(Connolly and Kick 2015)	Bitcoin	AMCIS	Generic	USA
(Cusumano 2014)		Communications of the ACM	A Journal	USA
(Georgoula et al. 2015)	Bitcoin	MCIS	Generic	Greece
(Glaser and Bezzenberger 2015)	Bitcoin & Decentralised Consensus Systems	ECIS	Generic	Germany
(Glaser et al. 2014)	Bitcoin	ECIS	Generic	Germany
(Hayes 2015)	Bitcoin	MCIS	Generic	USA
(Hur et al. 2015)	Bitcoin	ICIS	Generic	Korea
(Ingram et al. 2015)	Bitcoin	ECIS	Generic	Sweden/Germany
(Ingram and Morisse 2016)	Bitcoin	HICSS	Specialised	Sweden/Germany
(Kazan et al. 2015)	Bitcoin	PACIS	Generic	Denmark/Australia
(Lustig and Nardi 2015)	Bitcoin	HICSS	Specialised	USA
(Mai et al. 2015)	Bitcoin	ICIS	Generic	USA/Canada
(Meiklejohn et al. 2016)	Bitcoin	Communications of the ACM	A Journal	UK/USA
(Morisse 2015)	CC (Bitcoin)	AMCIS	Generic	Germany
(Polasik et al. 2016)	Bitcoin	International Journal for Electronic Commerce	A Journal	Poland/UK
(Tomaš and Švogor 2015)	Bitcoin	BLED	Specialised	Croatia
(Van Alstyne 2014)	Bitcoin	Communications of the ACM	A Journal	USA
(Zarifis et al. 2015)	Bitcoin	MCIS	Generic	Germany/China/Cyprus
(Zohar 2015)	Bitcoin	Communications of the ACM	A Journal	Israel

Table 2. Researchers Details

Results from Table 2 also outline the authors' location. Overall, current DC research is dominated by European researchers who have been involved in twelve (12) studies. However, four (3) of the studies involve the participation of researchers across continents. This limited collaboration among researchers from different regions of the world is an indication of the nascent stage of DC research to the IS community. Table 2 also highlight the DC covered and source of publication. The results show that the decentralised DC, Bitcoin is the focus of DC research.

3.2. What topics and issues have been addressed?

While addressing this question, we focus on two main areas – the locus and focus of the studies. First, we wanted to find out the locus of the study; that is whether the phenomenon investigated was end-users, organisations, systems or research. Table 3 summarizes the locus of DC research and indicate that most of the studies were located on systems issues.

Topics	References
End-User	(Georgoula et al. 2015; Glaser et al. 2014; Hur et al. 2015; Lustig and Nardi 2015; Mai et al. 2015; Zarifis et al. 2015)
Organisation	(Andrychowicz et al. 2016; Connolly and Kick 2015; Ingram and Morisse 2016; Ingram et al. 2015; Kazan et al. 2015)
System (Characteristics & Ecosystem)	(Cusumano 2014; Glaser and Bezzenberger 2015; Hayes 2015; Meiklejohn et al. 2016; Polasik et al. 2016; Tomaš and Švogor 2015; Van Alstyne 2014; Zohar 2015)
Research Directions	(Morisse 2015)

Table 3. Research Topics

Studies like that of (Georgoula et al.), (Glaser et al.) and (Hur et al.) Focus on addressing user perspectives of the system. However, (Connolly and Kick 2015) suggest that organisation adoption is more important than end-users because customers cannot use DC if organisations do not accept them. In contrast (Cusumano 2014) argues that Bitcoin are faced with a market-platform problem, such that if more organisations or merchants accept Bitcoin, more users will adopt them, and if there is an increase in users, organisations are more likely to use them. Collectively, these studies highlight a critical role for both potential users and merchant organizations to improve the adoption of DC. Therefore, studies like that of (Cusumano 2014) are mainly focused on the system while providing clarity on the characteristics of the technology (user and organization).

Second, under each locus, we wanted to find out the focus of the research and various issues that have been addressed. Figure 1 illustrates the various issues addressed about the topics.

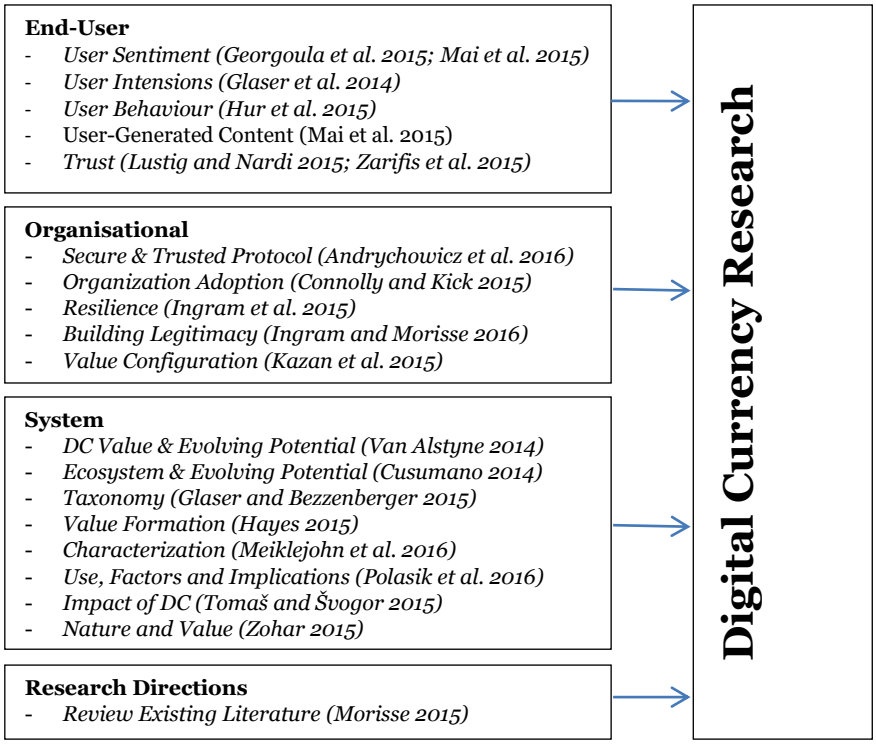

Figure 1. Categorization of DC Issues

Figure 1 depicts the different issues in relationship to the categories of topic areas. From the studies that address end-user perspectives, the study by (Georgoula et al. 2015) examined users' sentiment as a determinant for the price value of bitcoin. Similarly, (Mai et al. 2015) also used the measurement of users' sentiment expressed on social media and other internet-based platforms to examine the performance of Bitcoin as a currency. Other end-user related topics focused on issues such as examining of why users are interested in bitcoin (Glaser et al. 2014), and analysis of bitcoin users' influence on the speculative nature (Hur et al. 2015). The study by (Zarifis et al. 2015) used a different approach to addressing end-user trust by analysing the business to customer interaction and the characteristic of Bitcoin. (Lustig and Nardi 2015) Also, examine end-user trust based on Bitcoins algorithmic authority. Based on the results, we observed that the studies relating to end-user

perspectives address issues relating to sentiment, intention, influence and social communication, and trust amongst users. Therefore, the studies are concerned about human-related characteristics to evaluate Bitcoin value, price and factors of adoption.

The results illustrated in figure 1 outline various issues addressed in the category of organization related topics. In an investigation into the response to extreme events associated with Bitcoin, (Ingram et al. 2015) examined the resilience, adaptability, and transformability of organisations. The issue of bankruptcy of one of the largest bitcoin exchange (currency conversion) firms and how other businesses operating a similar business model are responding to the events that lead to the failure. While (Ingram et al.) based their study on evaluating organisation characteristic relating to the abilities. The study by (Connolly and Kick 2015) investigated using a different set of characteristics to compare between non-adopter and adopters of Bitcoin within organisations. The authors compared organisations using IT readiness, innovativeness, and social media presence. While the studies by (Ingram et al. 2015) and (Connolly and Kick 2015) provide in-depth understanding using organisation adoption factors, the legitimacy of DC such as Bitcoin remains a lingering issue. Hence, the study by (Ingram and Morisse 2016) focused on investigating how Bitcoin entrepreneurs in a new society make attempts to distinguish themselves from the larger Bitcoin community to build legitimacy.

In another study focusing on organisations, (Andrychowicz et al. 2016) approach examining organisation perspectives by developing a protocol for analysing the possibility of using bitcoin for a secure lottery system. (Andrychowicz et al.)'s study explored the possibility of designing an online protocol for playing lottery in a decentralized way, therefore addressing possible lottery organisation protocol modelling. A similar study focused on organisational modelling, (Kazan et al. 2015) examined organisations to understanding how CC companies create and capture the value of their digital business models, with consideration of the potentially disruptive capabilities associated with the technology. Contrary to the review by (Morisse 2015) where the author identified the lack of new business models based on DC, the investigations by (Andrychowicz et al.) and (Kazan et al.), provide evidence that research on DC continues to evolve by addressing the need for new business models.

Aside from the studies that focus on end-user and organisations, nine (9) papers reviewed indicate a focus on the system functionality, technical protocol, design fundamentals, characteristics and components of the systems ecosystem. Therefore, some of the studies from the results investigate both end-user and organisation perspectives about the nature of the technology. Studies such as (Hayes 2015) and (Polasik et al. 2016), analysed factors that influence Bitcoin price formation by first analysing the characteristics of the technology. However, Polasik extends further by providing evaluation into determinant for adoption. Similar to the study by Polasik, the study by (Zohar 2015) evaluated the characteristics of Bitcoin, usage, and the factors influencing adoption to provide understanding to the system. (Tomaš and Švogor 2015) also evaluated the characteristics of Bitcoin phenomenon to better understand the social implications of its application. (Tomaš and Švogor 2015) synthesized issues from literature related to the general comments about bitcoin, its anonymity character, technical challenges, and economic implications.

The study by (Van Alstyne 2014), evaluate the nature of Bitcoin to prove that the system has value and should be accepted as a currency and innovative payment system. (Van Alstyne) also, examines the evolving DC phenomenon with particular reference to the systems protocol. (Cusumano 2014) and (Glaser and Bezzenberger 2015) address similar issues of providing a better understanding of DC. While the study by (Cusumano 2014) is focused on providing an evaluation of Bitcoin ecosystem. (Glaser and Bezzenberger 2015) Focuses on classifying various Decentralized Consensus Systems based on their characteristics. In the study by (Meiklejohn et al. 2016), the author also examines the characteristics of DC. Meiklejohn investigated the characterization of Bitcoin network with a particular aim of understanding the possible anonymity in the protocol design and the actual anonymity of its users.

Finally, the last category of topic focused on providing research directions. The study by (Morisse 2015) reviewed existing literature on cryptocurrency and Bitcoin. The author highlighted of DC to IS research.

3.3. What theories and methods have been used?

Five of the 20 articles applied five theories. The theories used in DC research are summarized in Table 4. Five (5) theories have been in DCs research. The (Rogers 1995)'s Diffusion of Innovation (DOI) theory was used twice in DC research. The theory is used to understand how innovations are adopted over a time curve (Rogers 1995). According to (Rogers 1995), the curve consists of five (5) groups of adopters namely: innovators, early adopters, early majority, late majority, and laggards. The studies

that used the theory include (Connolly and Kick 2015) and (Polasik et al. 2016). Both authors used the principles to base their theoretical considerations for their research. However, (Polasik et al. 2016) used the concepts of DOI with the theory of network externalities when addressing the issues related to their study. The combination of theories provided the researchers the ability to assess the early success of Bitcoin.

Theories (Seminal Reference)	**Author**
Business Modelling (Al-Debei and Avison 2010)	(Kazan et al. 2015)
Model for Currency Acceptance (Dowd and Greenaway 1993)	(Hur et al. 2015)
Diffusion of Innovation (Rogers 1995)	(Connolly and Kick 2015; Polasik et al. 2016)
Theory of Network Externalities (Katz and Shapiro 1985)	(Polasik et al. 2016)
Trust Theory (Morgan and Hunt 1994)	(Zarifis et al. 2015)

Table 4. Theories used in DC Research

The study by (Zarifis et al. 2015) used the (Zarifis et al. 2014)' s Digital currency trust model which is an extension of (McKnight et al. 2002)'s web trust model to understand customers trust for DC transactions. (Zarifis et al. 2015) used the theory to evaluate the factors that influence of trust amongst DC users. Other studies such as (Kazan et al. 2015) used the (Al-Debei and Avison 2010) to develop a digital currency business model for value creation, and (Hur et al. 2015) used the (Dowd and Greenaway 1993)'s model for currency acceptance to demonstrate the actual reason for bitcoin's level of adoption and network effect.

Based on the results of the theories used it is evident that most of the literature reviewed are atheoretical. Hence, there is still an opportunity for subsequent research on DC to build on existing IS theories.

Author	**Research Method**
(Andrychowicz et al. 2016)	Prototyping
(Connolly and Kick 2015)	Qualitative Categorical Analysis
(Cusumano 2014)	Not Applicable
(Georgoula et al. 2015)	Sentiment Analysis
(Glaser and Bezzenberger 2015)	Design Science
(Glaser et al. 2014)	Quantitative
(Hayes 2015)	Quantitative (Regression Modelling)
(Hur et al. 2015)	Quantitative (Regression analysis based on panel data)
(Ingram et al. 2015)	Interview
(Ingram and Morisse 2016)	Case Study
(Kazan et al. 2015)	Case Study
(Lustig and Nardi 2015)	Survey and Interviews (Sequential Explanatory Mixed Method)
(Mai et al. 2015)	Quantitative Contemporaneous Analysis
(Meiklejohn et al. 2016)	Heuristic Clustering
(Morisse 2015)	Literature Review
(Polasik et al. 2016)	Quantitative (regression analysis based on panel data)
(Tomaš and Švogor 2015)	Not Applicable
(Van Alstyne 2014)	Not Applicable
(Zarifis et al. 2015)	Quantitative
(Zohar 2015)	Not Applicable

Table 5. Methods Used in DC Research

Table 5 outlines the methods employed in studies reviewed. From the results, we observed that (Cusumano 2014; Tomaš and Švogor 2015; Van Alstyne 2014; Zohar 2015) did not have any specific research method. The researchers did not provide any clear approach of how the study was conducted. The papers present write-ups that are closely similar to a review of literature as the authors cite other publications. However, the study by (Morisse 2015) clearly demonstrated the used literature review method. Apart from the study having a clear description of the research method, the study synthesized literature in a context-centric approach towards providing a summary (Webster and Watson 2002).

(Andrychowicz et al. 2016) also did not specify the research method used in the study. However, the paper presents a collaborative analysis of Bitcoin general situation before demonstrating the practicality of making changes that propose a new system, therefore suggesting that the study used a prototype research method (Baskerville 1999).

Other studies used in DC research include categorical analysis (Connolly and Kick 2015), sentiment analysis (Georgoula et al. 2015), Contemporaneous Analysis (Mai et al. 2015), Heuristic Clustering (Meiklejohn et al. 2016), Interview (Ingram et al. 2015), quantitative (Glaser et al. 2014), regression analysis and modelling (Hayes 2015; Hur et al. 2015; Polasik et al. 2016).

The evidence presented from the results indicate that researchers have used in-depth data gathering (interview and case studies) empirical statistics (regression analysis), sentiment elicitation (sentiment analysis), grouping (categorical analysis), system improvement study (prototyping) and sequential explanatory mixed method (Survey and Interviews) while conducting DC research. Studies have also contributed to understanding the DC phenomenon (Cusumano 2014; Tomaš and Švogor 2015; Van Alstyne 2014; Zohar 2015) and the state of DC research (Morisse 2015). The results indicate that researchers continue to explore the emerging DC phenomenon. However, there is still potential for future research.

3.4. What are potential future research areas on DC?

The studies presented so far provide evidence of knowledge that can be useful to academic researchers and practitioners. Nevertheless, there are prospective directions that are worth exploring. This subsection discusses the limitations of existing studies while pointing out potential areas for future research.

End-user issues covered in this study include sentiment, intention, behaviour, and trust of the system. These issues addressed provided a clear understanding of why users adopt the system and how the users' network effect influences the price. Studies by (Glaser et al. 2014; Hur et al. 2015) have highlighted the continuous increase of DC user. However, there is no coverage on the impact of DC on existing user. The impact of DC on existing users would provide clear insight towards understanding user satisfaction and performance.

Furthermore, the studies addressing end-user issues covered in this SLR have used broad-based or statistical approach (quantitative method). However, it would be beneficial for future research to use qualitative method to obtain in-depth perceptions or explore other forms of mixed method to provide a synthesis of styles for DC research. Also, studies addressing end-users' issues have inadequate coverage of existing theories as some theories would be relevant for organizational studies. This provides an opportunity for future research to take advantage of the limitation.

The studies addressed organisational issues covered design and post-adoption of DC. However, there are opportunities to extend coverage on industry issues by addressing the implications of re-engineering existing organisation processes resulting from changes due to new designs and adoption of DC. There is also a lack of coverage on how organisations are responding to the potentially disruptive nature of DC. Other coverage limitations that can be addressed include the use of a wider range of factors to evaluate adoption and the intention to use DC.

Although, the study by (Andrychowicz et al. 2016) explored the use of Bitcoin for gambling and lottery systems, other practical initiatives worth investigating include the use of CC for crowdfunding Distributed Autonomous Organisations, the case of testing Bitcoin payment for public services in Switzerland's city of Zug, and collaborations between Financial Technology (FinTech) innovative hubs (i.e. start-ups and incumbent firms) for proposed DC settlement systems. Other examples include the various government planned CC. Future studies may find it beneficial as these initiatives have may the potential of enhancing or further disrupting existing processes.

Furthermore, we observed that only one of the five organisation issues covered used a theory. Similar to the studies addressing end-user issues, there is an opportunity to build on a wide range of theories for clarifying organisation issues. Also, four of the five studies analysed organisation issue using interpretive approach. There are opportunities for future research to address issues using either positivism or pragmatic approach to evaluate organization issues.

Studies that evaluated systems issues covered mainly bitcoin. Although, the study by (Glaser and Bezzenberger 2015) provided a categorisation of other DC using their common characteristics for grouping. It would be beneficial to understand the features associated with the various forms of DC, their payment processes, and ecosystems.

Furthermore, only one of the systems related studies used a theory. Similar to end-user and organisation studies, this again provides future researchers the opportunity to explore the use of theories in system research on DC. Also, 4 of the eight studies did not have any method of conducting their investigation for the studies. This is an indication that studies on DC lack rigor of reporting the processes involved. Also, with the study by (Zarifis et al. 2015) focusing understanding DC Customer trust, it would be relevant for future research to explore the relationships between the known DC vulnerabilities and trust.

Finally, the only study that focused on research direction covers a review of literature up to the time of publication in 2015; it is expected that IS related research on DC should have increased and more areas covered. An example of change includes the discussion of new business models (Andrychowicz et al. 2016; Kazan et al. 2015). Therefore, we recommend regular review of literature on DC to ascertain the extent of work covered. Overall, we envision further exploration of end-user, organisation, and systems related issues. Table 6 outlines open research questions and potential research question.

Focus	Research Questions	Potential Theories
End-User	1. What is the impact of DC on its users? 2. What approaches can be used to measure the impact of DC on its users? 3. How can DC user satisfaction and performance be measured?	- Unified Theory of Acceptance and Use of Technology (Venkatesh et al. 2003) - Expectation Confirmation Theory (Oliver 1980)
Organization	4. What are the organisation views towards DC potential disruptive nature? 5. How would organizations respond to potential disruption of DC? 6. What are the implications of organization response to DC disruptive nature? 7. How would the changes associated with DC adoption be beneficial to organisation?	- Diffusion of Innovation Theory (Rogers 1995) - Disruptive Innovation Theory (Christensen 1997) - Dynamic Capability Theory (Barney 1991; Eisenhardt and Martin 2000)
System	8. What are the features associated with other forms of DC? 9. How are other DC payments processed? 10. What is the relationship between DC system vulnerabilities and trust?	- General System Theory (Von Bertalanffy 1968) - Unified Theory of Acceptance and Use of Technology (Venkatesh et al. 2003) - Trust Theory (Morgan and Hunt 1994)

Table 6. Open Research Question

4. Summary

Although, this literature review cannot claim to have exhausted all information systems research on digital currencies, this study has synthesized all the A ranked journals and Australian Council of Professors, and Head of Information Systems (ACPHIS) recommended IS conferences on DC between the years 2010 and 2016. Therefore, this systematic literature review summarises literature from the widely accepted knowledge source of IS research on DC. This does not guarantee that knowledge on information systems research can only be obtained from highly ranked or recommended paper. Hence, this limitation of this study can provide an opportunity for future research on DC phenomenon as some of the excluded studies from other research disciplines may be relevant. Future studies may also find it useful to review practitioner literature, as they can be a source of knowledge on various

initiatives on DC such as Fintech and government planned CC. It would also be worth extending the review period to cover a longer duration.

Overall, this study provides an up to date summary of literature on DC to provide researchers an outlook of what is known, what we need to know, and possible areas for future research. DC in information systems research is still a new but rapidly growing field of study. The outlook of the field continues to change while some issues still require future clarification. Given the rising number of DC research, we recommend a continuous review of literature to ascertain the extent of investigation covered in the research field. We also are of the opinion that there are still opportunities for researchers to examine the phenomenon using a variety of theories and methods.

Our future work is focused on evaluating how organisations would respond to the changes resulting from the feature associated with DC that have a potential of disrupting existing business processes. Possible ways of addressing this issue would be to use an exploratory mixed method design. We are keen on obtaining an in-depth understanding along with a broad-base perspective in the domain.

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