



Entrepreneurial Accounting as a Driver of SMEs' Sustainability: A Systematic Review

***Isiaka Kolawole Mustapha,**

PhD Student, Department of Entrepreneurship and Business studies, Federal University of Technology, Minna Nigeria
mikola0507@yahoo.com

Olalekan Busra Sakariyau,

Lecturer, Federal University of Technology, Minna Nigeria
zaksconsult@gmail.com

Umaru Mustapha Zubairu,

Lecturer, Federal University of Technology, Minna Nigeria
uzubairu@gmail.com

Jimoh Moruf,

Investment Manager, The Infrastructure Bank Plc, Abuja Nigeria
jimohmoruf2015@gmail.com

ABSTRACT

Despite the importance of SMEs in economic development and the increasing education in respect of entrepreneurial activities. It is imperative for SMEs to understand the benefits of accounting education. To address these challenges to business sustainability, this paper conducted a systematic review of entrepreneurial accounting (EA) articles published over the last ten years (2012 – 2022). Using the financial literacy theory as a point of reference. It examines the different dimensions of learning and importance of the concept on business venture survival or otherwise. This paper analysed the time distribution, geographic distribution, theory used, article type, data collection methodologies and themes of the EA article reviewed. The key findings show that EA interest has increased in Asia and Africa over the last decade, while Oceania (Australasia) were least represented. The most striking theme out of the five identified is the impact of EA as the heart of business ventures' sustainability, while the resource-based theory was most used to provide a clear understanding of the concept of the need for inherent management and cost accounting skills. Findings from the review confirm the importance of entrepreneurial accounting (EA) in SMEs as scholarly work has increased in recent times in the most developing economies, especially in Asia and Africa. This study recommended that EA skills should form part of the funding requirements for start-ups in accessing finance.

Keywords: entrepreneurial accounting, systematic review, sustainability, financial literacy theory.

Received: 28 September 2022 ;

Accepted: 8 March 2023 ;

Published: June 2023.

How to Cite:

Mustapha, I.K., et. al (2023). Entrepreneurial Accounting as a Driver of SMEs' Sustainability: A Systematic Review. *Journal of Business and Behavioural Entrepreneurship*, 7(1), 1-22. <https://doi.org/10.21009/JOBBE.007.1.01>

INTRODUCTION

Entrepreneurs education is an element of business sustainability and societal growth through the development of required entrepreneurial skills, knowledge and competencies to equip business owners (Reyad et al., 2020). One of the core skills and competencies needed to excel in a business venture is the understanding of the importance of accounting and financial education (Ward et al., 2011). No doubt, an entrepreneur needs to be an innovative and risk taker, someone, to create a new business. Also, entrepreneurs not only need the marketing skills to excel but the financial skill for the sustainability of the business. Eniola and Entebang (2017) and Reyad et al. (2020) averred that Micro, small and medium enterprises (MSMEs) requires to be financial literate in order to have the required information for sustainable business. This is not just accounting information, but financial education for all aspect of business value chain including marketing and sales, transport and logistics, production and warehousing.

The concept of entrepreneur accounting explores the relationships between entrepreneurship activities and accounting skills taking into consideration of the behavioural patterns of entrepreneurs in financial literacy (Hanif et al., 2019). The concept, therefore, emphasises the importance of financial capabilities in the aspect of planning, business control, cash management, budgeting and forecast, and taxation in business ventures, especially e small and medium enterprises. Sernett (2014) noted that the survival or failure of an enterprise is hinged on the accounting or financial literacy of the entrepreneurs.

Founders of new businesses seem to always focus on the innovation and marketing of new products, and slightly forget the financial management aspect of a business. This is played out in most AgTechs crowdfunded schemes in Nigeria where founders unexpectedly received overwhelming investment funds that were eventually mismanaged due to in most part entrepreneurial accounting skills inadequate. How can eliminate such monumental loss of more than N200 billion (Olaoluwa, 2021) is the main reason to understand the importance of basic financial information to both entrepreneurs and investors. Hence, the need for business owners/entrepreneurs to develop the necessary

management and cost accounting skills for business sustainability (Okoye et al., 2017; Hanif et al., 2019; Wogboroma & Amesi, 2021).

Given the importance of entrepreneurial accounting (EA) skills for the sustainability of SMEs in the project of growth and development of society, this research conducted a systematic literature review of the past ten years of this vital business management concept towards understanding the relationship between entrepreneurs and accounting skills which is central to business survival. Six research questions were posed to address the impact of financial literacy or lack of it in business ventures for sustainability.

The rest of this paper is divided into four sections. The next section described the method adopted by this paper in conducting the systematic review. This is followed by the result and discussion of the review as it relates to the 79 articles reviewed by answering all the questions posed. This research ends with a conclusion section which summarises the findings of the EA systematic review.

LITERATURE REVIEW

Financial Literacy Theory: Rationale for Business Sustainability

The concept of financial literacy provides a theoretical foundation that informs our understanding of entrepreneurial accounting. Empirical literature has shown that many SMEs owners or manager have little knowledge concerning basic accounting concepts like inflation rate, foreign exchange and interest rate, therefore, lack good financial decision making (Grohmann, *et al.*, 2015). Kovács and Terták (2019), Ghasarma *et al.*, (2017), Henager and Cade (2016) and Grohmann, *et al.* (2015) described financial literacy as the knowledge and ability of an individual to manage finances for effective decision making. In a bid to provide more meaningful definition that incorporate dynamic global environment, In Swiecka (2018), Bechetti *et al.* (2013, pp. 817-836) defines financial literacy as “the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of the financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being”.

The definitions can be divided into two important parts that underpin this research. First is that entrepreneur’s behaviour, culture and character regarding the financial knowledge and secondly the skills and ability to deploy this financial knowledge for sustainability of his/her enterprise. Globalization has created many challenges and opportunities for SMEs, such as competition, international market, human resources, investors and increase social network. Lack of or inadequate knowledge of basic accounting information therefore may pose threat to the life span or the sustainability of businesses (Cho and Lee, 2018; Naradda *et al.*, 2020; Domi and Domi, 2021).

Financial literacy or financial education is said to play a significant role in improving investment decisions (Deepak et al., 2015), reducing financial crisis in a nation (Kovács and Terták, 2019) and provide improved wellbeing of entrepreneurs (Thomas and Gupta, 2021). The financial literacy concept has been measured in different dimensions by researchers. For example, Henager and Cude (2016) measured the concept

in three ways: (1) objective knowledge, (2) subjective knowledge and (3) management ability. While Zait and Berteau (2014) view financial literacy in five dimensions, namely: (1) financial knowledge, (2) Financial communication, (3) Financial ability, (4) financial behaviour and (5) experiences and confidences.

Given the role of this important concept in relation to entrepreneurial accounting, an understanding of basic accounting information will help entrepreneurs as well as investors alike to creating sustainable businesses.

RESEARCH METHOD

This empirical study utilized the systematic quantitative assessment technique (SQAT) as developed by Pickering & Byne (2014) to conduct a systematic review of scholarly articles on entrepreneurial accounting (EA) over a decade (2012 – 2022). The SQAT method allows researchers to use recommended five steps process in systematically reviewing published journals and producing a quantitative summary of a subject matter. The five steps are: 1) Define your topic scope, 2) articulate research questions, 3) recognise the keywords or combination of words, 4) identify and search the right database and 5) review and synthesize journal publications.

Following these steps in this research, first, we identify keyword combinations of “entrepreneurial accounting”, “entrepreneurial financial literacy” and “SME financial literacy”. Then the following research questions were posed:

- 1) When were the EA articles published?
- 2) Has there been scholars’ interest in EA across the geographical location of the world?
- 3) What has been the focus of scholars in EA articles, theory development (conceptual) or empirical testing?
- 4) What are the different types of data collection methods employed?
- 5) Are there new theories developed and which are discussed?
- 6) What subject matters (themes) were explored by these articles and their findings?

In collecting the articles used in this systematic review, the keywords (“allintitle: entrepreneurial accounting”; “allintitle: entrepreneurial financial literacy”; and “allintitle: SME financial literacy”) were searched on Google Scholars. We then proceed to browse the title and abstract of these articles for relevance to EA. A total of 131 EA articles were collected and reviewed. However, some inclusion criteria were applied: first, the study excluded book chapter, working papers and reports. To increase the sample size, journal articles were not categorized by publishers. All the searches and reviews were concluded on April 25, 2022.

The next section of this paper provides detailed findings of the systematic review to answer each research question.

RESULTS AND DISCUSSION

When Were the EA Articles Published?

Figure 1 presents the time distribution of the published articles in 79 EA journals reviewed for this study. It can be observed that scholarly interest started waxing strong from 2016 to 2020, even though previous years witness four publications in 2012 and 2014. Also, two publications in 2013. By 2015, it seemed that scholarly attention has

moved with no publication. 2018 witnessed a surge from seven to 18 publications and a spiked in 2020 to 20 published articles. But the publication took a dip in 2021 to just 9 articles. The number of published articles in 2022 cannot be considered as the only publication for the year as only the journals published during the first quarter of the year are considered. Table 1 provide the general perspective of the research interest.

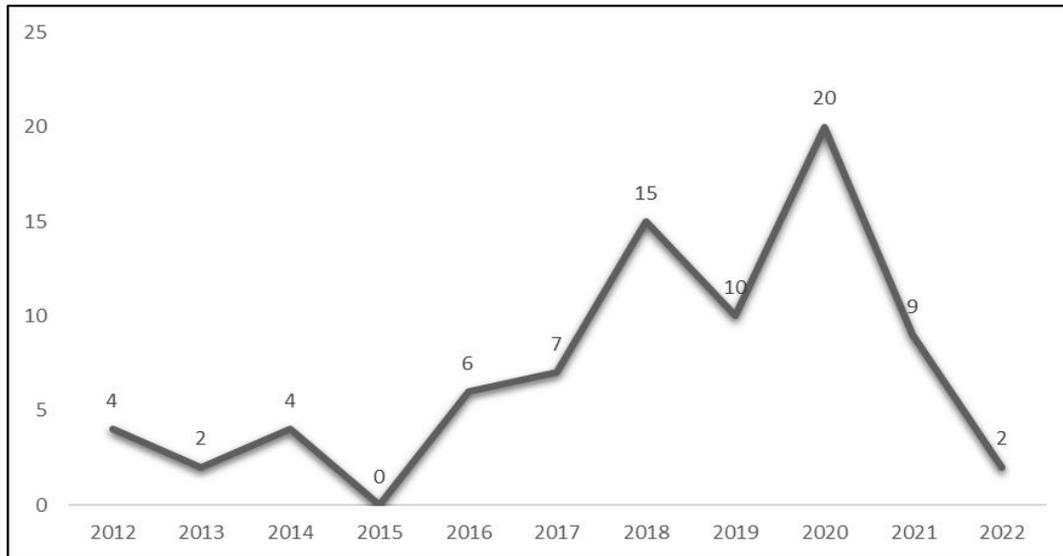


Figure 1: Time distribution of EA articles over a decade.
 Source: Authors' review (2022)

Table 1: General perspective of the EA article.

Research Work	Objective	Database
Bratland (2012)	The paper examines the divergence view in the respective calculation of capital and income by entrepreneurs and accountants in business enterprise.	The need for entrepreneurs and investors to be well grounded in financial terms.
Laitinen (2014), Abdullah et al. (2014)	Developing accounting graduates using simulation model to teach entrepreneurs traits and values in their mindset thus encouraging entrepreneurship.	Provide a basis for planning, developing and implement strategies to improve financial literacy.
Dragan et al. (2018)	Insights into the relationship between university curriculum and student's entrepreneurial skills development as a predictor of innovative activities.	The importance of creating a great university curriculum to

		improve financial literacy.
Jean-Claude et al. (2018)	Provide overview of how entrepreneurial skills and ability can utilized to improve the assess to capital.	Proper documentation of intangible assets of SMEs.
Ahmed et al. (2019)	Examine the role of social medial on entrepreneurial activities by providing required information and knowledge required for business sustainability.	The importance of the availability of information and proper communication cannot be over emphasized.
Agyei (2018), Ni'matulHairo et al. (2020), Wijayanto et al. (2020)	Investigate the effect of financial literacy on SME performance. The influence of the accounting information and human resources on SME performance.	There exists a significant influence on performance of enterprises by financial literacy and accounting information usage.
Augustina et al. (2021)	Evaluate the effect of entrepreneurial attitudes of accounting students towards entrepreneurial intentions.	Entrepreneurial training sharpens the entrepreneurial intentions.

Source: Authors' review (2022)

Has There Been Scholars' Interest in EA Across the Geographical Location of the World?

In this part of the study, the geographical distribution of EA scholarly articles is presented in two groupings; 1) continent distribution and 2) countries distribution of the entrepreneurial accounting articles reviewed in this study.

A review of the 79 EA articles revealed that Asia has the highest representation with 32 (40%) articles as presented in Figure 2. The closest to this is Africa with 24 (30%) journal articles in the second position. Europe came at a distant third with 12 (15%) EA articles, followed by North America with 8 (10%) and South America with 3 (4%). Oceania had one (1%) published article within the reviewed period. There are 14 countries in Oceania, and it is surprising to see that only one EA article reviewed in this study originated from these countries. Also, the EA articles reviewed from South America (3) are rather too small for a developing continent with 13 countries. The obvious recommendation from this study for the future researcher is that more EA research needs to be conducted to provide perspectives on how important small businesses and entrepreneurs view accounting knowledge and financial literacy in these continents.

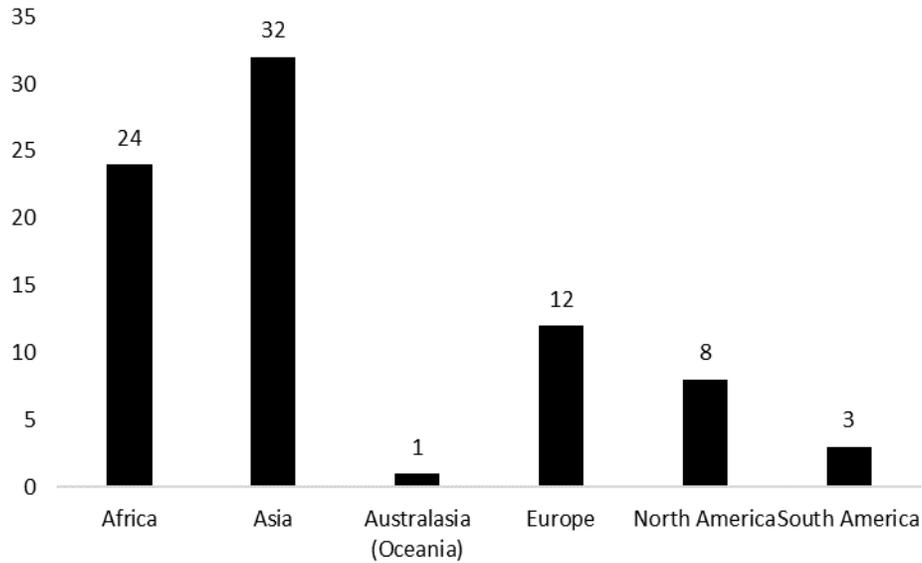


Figure 2: Distribution of Journals by continent

Source: Authors' review (2022)

Another revelation from the review shows that Asia and Africa's continent increased contributions to EA research significantly from 2018 to 2022. Asia had 29 EA articles within this period which represent 48% (29) of EA articles published within the decade (2012 -2022). The same trend is noticed in the EA publications in Africa, 40% of articles were published in the most recent period. This research finding (Figure 3) is particularly of interest because, since the emergence of COVID-19 global pandemic in 2020, 14 EA articles were published in Asia alone and three EA articles were published in 2020 in Africa. Could there be a nexus between pandemic and entrepreneurial accounting? This could be a research gap that needs investigation.

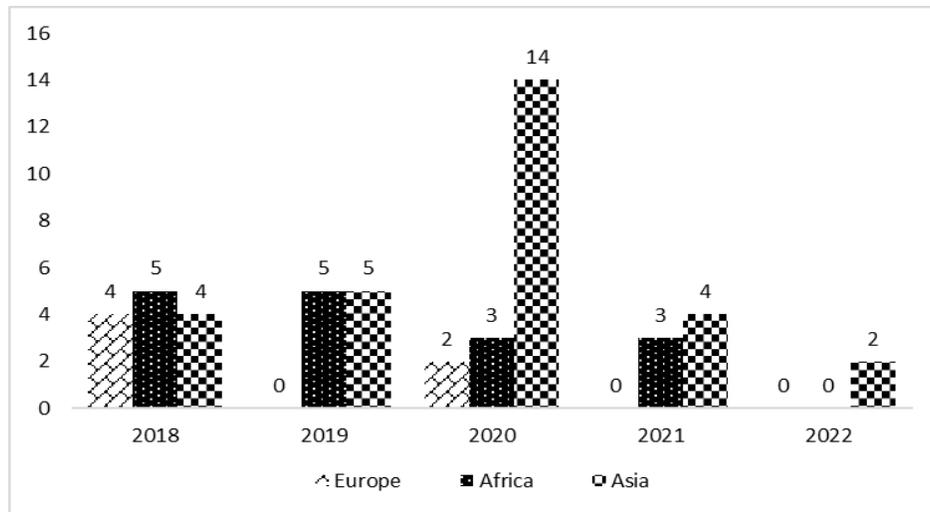


Figure 3: EA publications between 2018 – 2022

Source: Authors' review (2022)

Geographical distribution based on country; 28 different countries were represented with at least a journal publication on EA. Figure 4 presents the top eight countries with the most EA articles in this study. Indonesia had the most published articles in this review with 16 published journals. Nigeria came second with 10 EA articles, followed by The United State of America and Malaysia with six EA articles each, followed by Ghana with 4, Brazil, Tanzania and Egypt rounded up the top eight with 3 EA articles each.

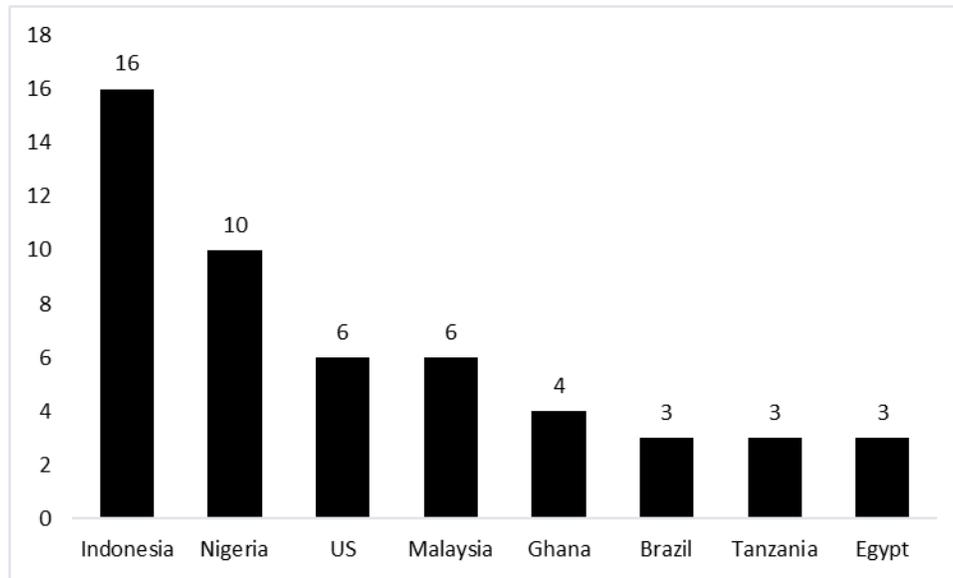


Figure 4: Country distributions of EA articles.

Source: Authors' review (2022)

Table 2 shows the remaining 20 countries arranged based on the number of EA articles published in the country.

Table 2: Remaining 20 countries with at least one EA article.

S/ No.	Country	Number of EA Articles	S/ No.	Country	Number of EA Articles
1	Italy	2	11	Canada	1
2	Sweden	2	12	Philippine	1
3	Romania	2	13	China	1
4	Kenya	2	14	Sri Lanka	1
5	Bahrain	2	15	Iraq	1
6	Finland	1	16	Saudi Arabia	1
7	France	1	17	Tunisia	1
8	Netherlands	1	18	South Africa	1

9	Ukraine	1	19	Turkey	1
10	Mexico	1	20	Poland	1

Source: Authors' review (2022)

Empirical findings from this review show that only 28 countries were represented which is quite low considering the number of countries on this Planet Earth. Considering the number of countries in the world is stated to be 195 by Worldometer. This presents an 85% research gap based on countries that need to be filled by future scholars as all these countries have entrepreneurs and/or small businesses for economic development. Another intriguing finding is the dominance (79%) of the developing countries in the EA articles reviewed by this study over the last decade. One might argue that the developed nations have passed the stage of entrepreneurs learning the intricacies of accounting in starting a business or that the countries' system takes care of small businesses regarding EA. These and more need to be explored to understand the wide disparity.

What Has Been the Focus of Scholars in EA Articles, Theory Development (Conceptual) or Empirical Testing?

For this study, all journal articles that discuss the fundamental building blocks for the understanding of the EA concept and/or develop new ideas to support the principle of financial literacy in entrepreneurial ventures are termed conceptual. While all EA articles that collect and process any form of data in their research were grouped as empirical papers. Based on this arrangement, 79 articles used for this systematic review were divided into either empirical or conceptual as presented in Figure5.

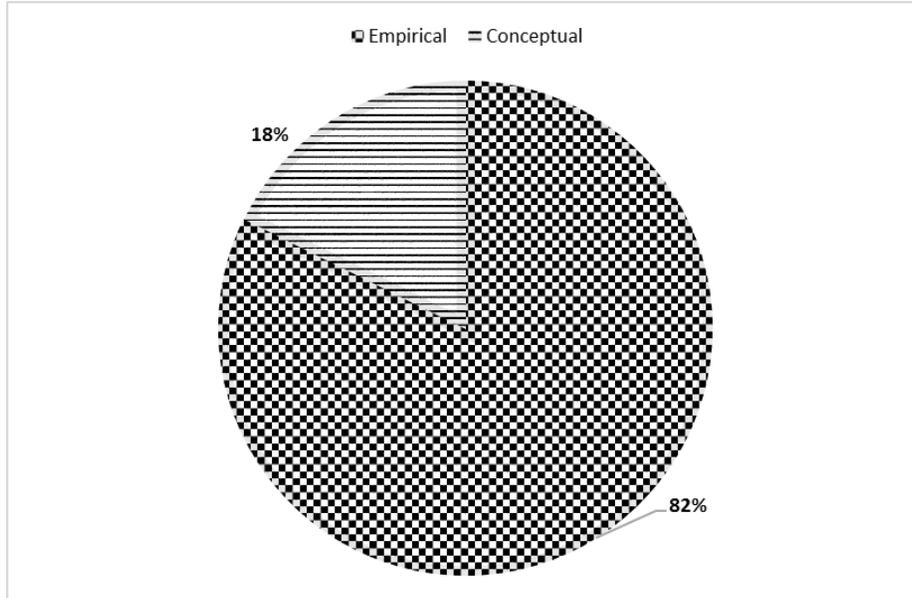


Figure 5: Article types

Source: Authors' review (2022)

Figure 5 shows that the majority (82%, 65 articles) of the 79 EA articles reviewed were based on empirical research. These articles sought to test most underlying principles of EA in start-ups and small and medium enterprises. For example, Ziatul & Ilona (2022)

investigated the impact of financial literacy on the sustainability of SMEs; Wogboroma & Amesi (2021) explore the relationship between student self-sustainability and acquisition of entrepreneurial accounting skills. Others investigated the impact of EA on marketing (Putulowskii *et al.*, 2021); entrepreneur behaviour (Mudasih *et al.*, 2021); women entrepreneurs (Yasin *et al.*, 2020) and self-employment (Reyad *et al.*, 2020). On the other hand, 18% of the EA article reviewed were based on conceptual research with authors providing background to the EA concepts (Hanif *et al.*, 2019; Krisanto, 2020) and documenting recommendations as to the importance of EA to the sustainability of SMEs (e.g. Al-Sanafawy, 2021).

Figure 5 depicts the inequity in the reviewed EA journals in the last decade that just suggested the need for more concept development to form the basis for a better understanding of the significant importance of EA to entrepreneurship.

What Are the Different Types of Data Collection Methods Employed?

The empirical study employs the use of data in research analysis, hence in answering this question only 65 empirical articles were considered. The seven different types of data collection methods used by the authors of these 65 empirical articles are presented in Figure 6.

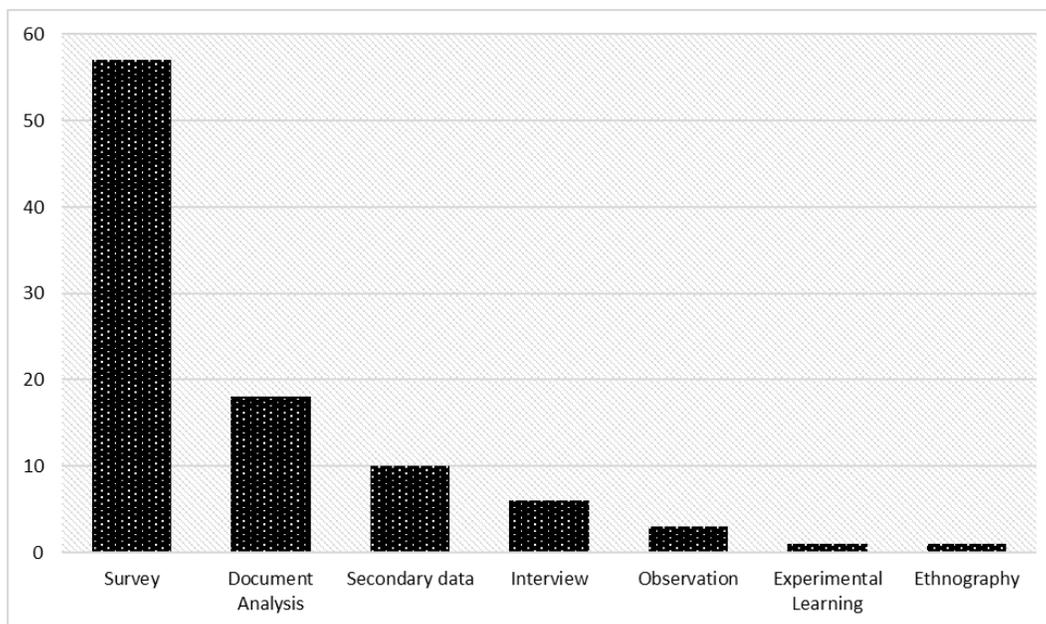


Figure 6: Data collection method

Source: Authors' review (2022)

Figure 6 shows the obvious bias for the use of a survey in data collection methods for the 65 empirical journals reviewed. Although some articles used a combination of these methods in their empirical analysis (e.g. Anisuba, 2017; Owusu *et al.*, 2019; Azim *et al.*, 2020), the review indicates that the majority of the 65 articles (51 out of 65) employ survey as a means of data collection (e.g. Mukhtar & Envy, 2017; Mabula & Dongping, 2019; Radianto *et al.*, 2020; Lizote *et al.*, 2021; Document Analysis follow in a distant second with 18 articles, followed by secondary data with 10 EA articles. Six EA articles

used the interview as a method of data collection, however, only 33% (2 out of 6) employed only interview as a method of data collection (Mouritsen & Pflueger, 2018; Almeda *et al.*, 2020). Three articles rely on the strength of the observation method (Situmorang *et al.*, 2018; Hanif *et al.*, 2019; and Krisanto, 2020), while one article employ the use of Experimental learning (Moreira *et al.*, 2020) and Ethnography (Hanif *et al.*, 2019).

Several EA articles reviewed combined two or more methods of data collection. For example, Chen *et al.*, (2016); Anisuba (2017); Nohong *et al.* (2019) combined survey and secondary data, while Laux & Stocken (2016) and Owusu *et al.* (2019) combined both secondary and document analysis methods. One article combined interview, secondary data and document analysis (Akroyd *et al.*, 2019), while another one combined interview, observation, document analysis and ethnography to collect EA data (Hanif *et al.*, 2019).

EA scholarly articles review depicted that majority of the 65 empirical studies use only survey (51 out of 65) as the method of data collection, that is over 78% of the EA articles. This method of data collection may often take a qualitative, quantitative and mixed approach to research analysis, however, there is a need to seek the use of combining different data collection methods in order to obtain an in-depth understanding of the subject matter being explored. The use of different sources of data collection reduces the potential biases that may occur in a mono-source study (Zina, 2021). Therefore, future research on EA should adopt the use of a combination of different data sources following the example of Hanif *et al.* (2019) who employ four different sources.

Are There New Theories Developed and Which Were Discussed?

The analysis of the 79 EA scholarly articles revealed several theories used. A total of 32 theories formed the underlying discussion of 37 (46%) EA articles reviewed. Although a significant number (54%, 54 out of 79) of the journal did not employ any theory in their analysis of entrepreneurial financial literacy. Figure 7 presents the analysis of the topmost used theory.

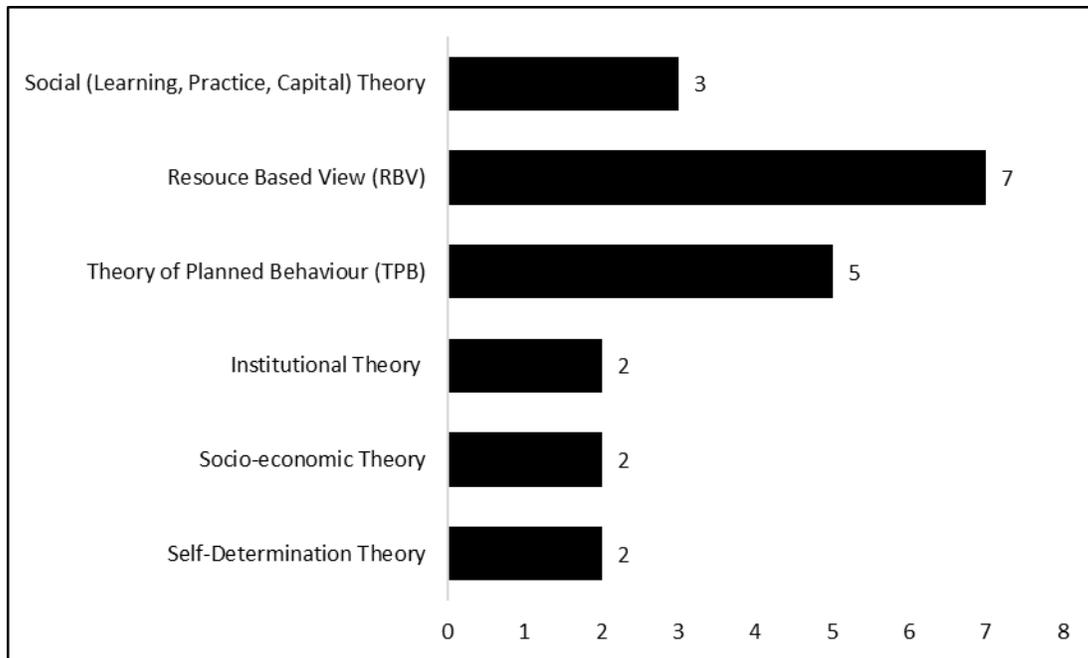


Figure 7: Analysis of theory used.

Source: Authors' review (2022)

The most used theory is the Resource Based Theory (RBV) (7 out of 37) followed by the Theory of Planned Behaviour (5 out of 37), then Social Theory (3 out of 37). Institutional Theory, Socioeconomic Theory and Self-Determination Theory have 2 EA articles each. Some other theories used in supporting the entrepreneurial accounting concepts are experiential learning theory (Okafor & Onwumere, 2012), mental accounting theory (Ramesh *et al.* 2014), entrepreneurial orientation (Andersen & Samuelsson, 2016), complementarity theory (Akroyd *et al.*, 2019), contingency theory (Dewi & Widhiyani, 2020) and knowledge-based view (KBV) (Kulathunga *et al.*, 2020).

The resource-based theory or view (RBV) was used to show emphasis the use of resources by an enterprise to improve performance and establish business sustenance (Eniola & Entebang, 2016; Eniola & Entebang, 2017) through a 'complex financial' decision-making process (Utomo *et al.*, 2020). The RBV postulates that efficient use of resources as input gives rise to an output that is influenced by decision making. That an enterprise with the capability to manage resources that are inimitable, rare, valuable and with no close substitute will enjoy high growth and performance (Agyei *et al.*, 2019; Utomo *et al.*, 2020; Zaitul and Ilona, 2022). Owusu *et al.* (2019) and Kanaan-Jebna *et al.* (2022) therefore noted that there exists a relationship between SME financial literacy and business performance that will enhance the sustainability of the business.

The theory of planned behaviour (TPB) was used to describe the behaviour of an entrepreneur as a purposeful intention or desire to execute certain investment decisions using accounting information (Bidin *et al.*, 2012; Rahmiyanti *et al.*, 2020). These behaviours identify three dimensions: personal desire, social perception and behavioural control, towards entrepreneurial accounting and education (Passoni & Glavan, 2018; Widjaja & Dermawan, 2020). The social theory was used in identifying the activity and influence of the cultural and social practice within the society in the building and learning

process of an entrepreneur (Mabula & Dongping, 2019; Ademilua *et al.*, 2020; Kistyanto *et al.*, 2020). The institutional theory was used to explain the creation of business and entrepreneurship (Delgado *et al.*, 2017) as well as the importance of planning, a branch of management accounting, in SMEs (Samuelsson *et al.* 2016). Innovation is noted to be the key element in the development of SMEs, this represents how economic theory anchored EA in enterprises (Anisiuba, 2017; Ya, 2020). Self-determination theory describes the individual motivation to succeed in business taking into consideration the internal and external (cultural and social) environment (Almeda *et al.*, 2020; Ademilua *et al.*, 2020).

Although several other theories were employed in the articles reviewed by this author. For example: Agency theory and signal theory (Shehab *et al.*, 2021), Perceived risk perception theory (Kusumastuti *et al.*, 2018), financial aliteracy theory (Mwangi and Cheluguet, 2018) and Person-environment fit theory (Massaro *et al.*, 2013). However, more than 50% of these reviewed articles did not employ any known theory as the basis of their research. See for example Szafrńska and Matysik-Pejas (2012), Duman *et al.* (2013), Affes *et al.* (2014), Lyons and Bandura (2016), Lam *et al.* (2016), Khoza *et al.* (2017), Oshi *et al.* (2018), Reyad *et al.* (2019), Razak *et al.* (2020) and Mohammed (2021). Hence, the need to postulate and test more theories in support of the importance of entrepreneurial accounting in SMEs.

What Subject Matters (Themes) Were Explored by These Articles and Their Findings?

Five different EA themes were explored by the 79 articles reviewed in this study: 1) The EA impact on SMEs, 2) EA Education/awareness, 3) EA and professional practices, 4) EA views on business issues and 5) Factors affecting EA or financial literacy. Figure 8 presents how the articles reviewed relate to each theme.

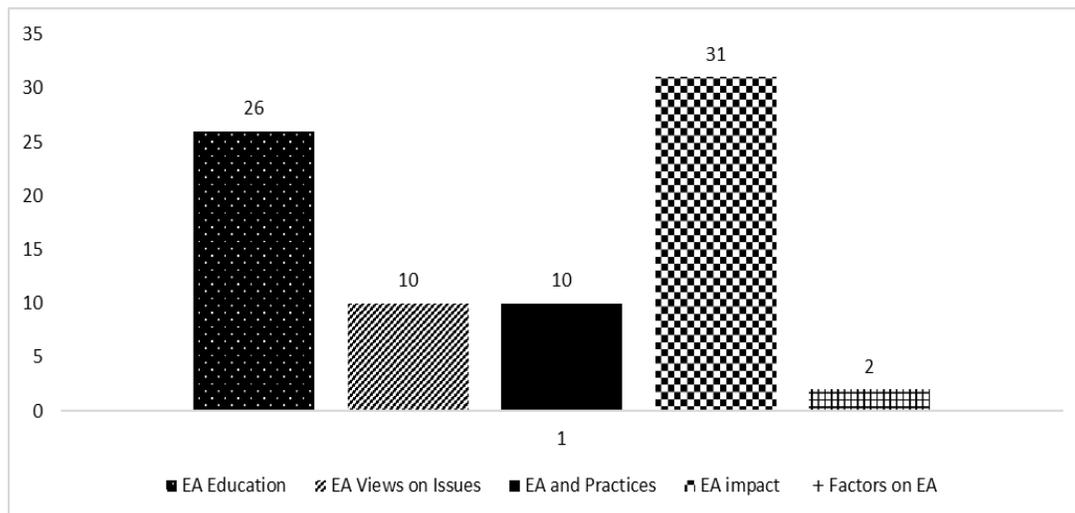


Figure 8: EA themes explored by 79 articles reviewed.

Source: Authors' review (2022)

Figure 8 shows that 39% (31 out of 79) of the articles reviewed explored the impact of EA on entrepreneurship particularly the importance of financial literacy and

accounting experience and practices on the performance and growth of business ventures (for example Purwidiyanti & Tubastuvi, 2019; Oppi *et al.*, 2020; Kistyanto *et al.*, 2020). The contribution of accounting skills and experiences are said to have a sustainable impact on the growth of an enterprise. These articles noted that there is a positive relationship between accounting knowledge or financial literacy and entrepreneur behaviour that influence the growth of SMEs (Mudasih *et al.*, 2021), enhances the economic status of SMEs managers and provides sustainable business (Okoye *et al.*, 2017).

The second most discussed theme was entrepreneurship accounting education (EAE), 33% (26 out of 79) of the articles reviewed found the contributory benefit of EA to developing knowledge and skills (e.g. Hanif *et al.* (2019); Reyad *et al.* (2020); Fasaie & Adeosun (2021); Wogboroma & Amesi (2021). Okoye *et al.* (2017) and Mudasih *et al.* (2021) noted that EAE is an important tool for SMEs growth and development in the face of a dynamic environment. Especially cost accounting due to its usefulness in planning, controlling and decision-making process of businesses (Salako & Aremu, 2016). However, with the need to focus on the customer management aspect of business, AL-Sanafawy (2021) expatiates on the importance of management accounting for entrepreneurs. “Techno-finance literacy” was noted by Kulathunga *et al.* (2020) and Mabula & Dongping (2018B) to be very crucial in the business start-up due to the rapid digitalization of processes across business ventures, especially in the area of food security and sustainability (Mustapha *et al.*, 2022).

The 26 articles reviewed under the EAE theme revealed that most challenges in the establishment of business enterprise can be addressed properly through entrepreneurship accounting education. The growth, development and sustainability of business are hinged on the financial literacy of the business owners.

The third themes of the EA articles reviewed were EA professional practices and EA views on issues. Both themes have 10 articles (13%) each. EA professional practice articles provide information on entrepreneurial accounting competencies of professional service providers in the area of planning, decision making and management (Lizote *et al.*, 2021), the factors that contributed to being a successful entrepreneurial accountant (Almeda *et al.*, 2020) and Chen *et al.* (2016) provide an understanding of how a change in accounting standards and procedures impact entrepreneurs. Regarding EA views on issues, Agyei *et al.* (2019), explained the EA’s role in cultural values and the financial well-being of business owners. The effect of management accounting on competition, financial performance and entrepreneurial orientation were analysed (Tanui, 2020) and the accounting valuation of SMEs (Mouritsen & Pflueger, 2018).

The 79 articles revealed the important roles of EA in SMEs in preparing business owners against business and environmental uncertainties. Several enterprises were affected by the COVID-19 pandemic, however, very few that are grounded in cash management and management accounting practices survived the crisis. Therefore, the EA research, education and knowledge sharing within entrepreneurs’ space is a continuous activity for SMEs to attain their economic potential. However, the EA knowledge gap can significantly be reduced through business cluster policy that seek to create networking opportunities among enterprises (Jegade, 2020, Ibidunni *et al.*, 2020) which can lead to individual firm growth through innovation (Mustapha, *et al.*, 2021).

CONCLUSION

This research provided a comprehensive review of the 79 EA and financial literacy articles published in the last decade to provide understanding regarding six research questions, in area of the time distribution, geographical location, conceptual development, method of data collection, adoption of existing theory and the theme explored by the authors. Findings show that interest in EA has been growing over the last ten years with a giant spike in 2020 and that Asia has been the most productive continent in terms of EA research, especially in Indonesia. This review also revealed that empirical research was adopted by most of the EA articles, with the survey method understandably being the most used data collection method. Although most of the 79 articles reviewed did not adopt any theory, however, RBV is the most underpinning theory adopted by a few articles. Four subject matters were explored by the 79 EA articles reviewed establishing the important role of EA education being the most discussed theme.

Although this review tried to widen the search years for the EA article published, it is still limited to a decade in order to accommodate recent happening. Also, books, working papers and reports were excluded from this review. The future reviewer may consider their inclusion and adopt a different approach to provide an all-inclusive representation of the research interest in EA by scholars.

The review of EA articles has revealed that for SMEs to achieve growth, development and sustainability of businesses or entrepreneur ventures, the principle of entrepreneurial accounting education must be taken seriously with a deliberate effort by business owners.

REFERENCES

- Abdullah, A., Danila, R., & Ibrahim, M. (2014). Developing entrepreneurial accounting graduates using accounting simulation model among accounting students at Malaysian public universities. *Procedia-Social and Behavioral Sciences*, 164, 647-652.
- Ademilua, V. A., Lasisi, T. T., Ogunmokun, O. A., & Ikhide, J. E. (2020) Accounting for the effects of entrepreneurial orientation on SMEs' job creation capabilities: A social capital and self-determination perspective. *Journal of Public Affairs*, e2413.
- Affes, H., & Rhouma, H. B. (2014). Practices Of Management Accounting And Entrepreneurial Orientation. *International Journal of Core Engineering & Management (IJCEM)*, 1(8), 18.
- Agyei, S. K. (2018). Culture, financial literacy, and SME performance in Ghana. *Cogent Economics & Finance*, 6, 1-16

- Agyei, S. K., Adam, A. M., & Agyemang, O. S. (2019). Financial Literacy, Cultural Dominance, and Financial Well-Being of SME Owners in Ghana. *Poverty & Public Policy*, 11(3), 222-237.
- Ahmed, E. R., Rahim, N. F. A., Alabdullah, T. T. Y., & Thottoli, M. M. (2019). An examination of social media role in entrepreneurial intention among accounting students: a SEM study. *Journal of Modern Accounting and Auditing*, 15(12), 577-589.
- Akroyd, C., Kober, R., & Li, D. (2019). The emergence of management controls in an entrepreneurial company. *Accounting & Finance*, 59(3), 1805-1833
- Almeda, A., Balisi, L. M., Concepcion, R. A., Lofamia, J. C., Tapeç, J. A., & Padayao, P. M. T. (2020). 'Calculated Risk-Taking': The Success Factors of Entrepreneurial Accountants. *New Trends in Qualitative Research*, 1, 8-29.
- AL-Sanafawy, D. M. E. (2021). Role of Contemporary Management Accounting Practices in Reducing Customer Uncertainty in Entrepreneurial Startup Firms., 40, 1-31.
- Andersén, J., & Samuelsson, J. (2016). Resource organization and firm performance: How entrepreneurial orientation and management accounting influence the profitability of growing and non-growing SMEs. *International Journal of Entrepreneurial Behavior & Research*, 22(4), 466-484. <https://doi.org/10.1108/IJEBr-11-2015-0250>
- Anisiuba, C. A. (2017). Place of Accounting Knowledge in Entrepreneurial Success in Nigeria. *IJSAR Journal of Advanced Management and Social Sciences*, 4(1&2), 152-171.
- Agustina, T. S., Fitdiarini, N., & Heru, A. (2021). Entrepreneurial Intentions of Accounting and Management Students. *Berdikari: Jurnal Inovasi dan Penerapan Ipteks*, 9(1), 1-13.
- Azmi, N. F., Mohamad, S. R., Hasan, H., Deraman, S. N. S., Abdullah, T., Abdullah, S. S., & Hashim, N. A. A. N. (2020). Analysis of the Relation between Financial Literacy and Entrepreneur. *International Journal of Engineering Research and Technology*, 13(12), 5429-5435
- Becchetti, L., Caiazza, S., Coviello, D. (2013). Financial education and investment attitudes in high school: evidence from a randomized experiment. *Applied Financial Economics*, 23, 817-836.
- Bidin, Z., Mohd Shamsudin, F., & Othman, Z. (2012). Applying the theory of planned behavior on entrepreneurial intent among Malay accounting students in Malaysia. *International Journal of ASEAN*, 1(1), 49-60.
- Bratland, J. (2012). Entrepreneurial Strategy v. accounting accuracy in 'calculating' capital and income. *The Review of Austrian Economics*, 25, 93-114.
- Cho, J., & Lee, J. (2018). Internationalization and longevity of Korean SMEs: The moderating role of contingent factors. *Asian Business and Management*, 17, 260-285.
- Chen, Q., Ding, S., Wu, Z., & Yang, F. (2016). Family control, international accounting standards, and access to foreign banks: Evidence from international entrepreneurial firms. *Journal of Small Business Management*, 54(2), 598-621.

- Deepak, C. A., Singh, P., & Kumar, A. (2015). Financial literacy among investors: theory and critical review of literature. *International Journal of Research in Commerce, Economics & Management*, 5.
- Delgado, M. V. M., & Valencia, E. (2017). Entrepreneurial Status Of The Students Of The Bachelors In Administration And Accounting Of The University Of Sonora In Mexico. *Journal of Multidisciplinary Engineering Science Studies*, 3(2), 1350-1356
- Dewi, M. K., & Widhiyani, N. S. (2020). The Influence of Self Efficacy, E-Commerce And Entrepreneurial Education in Decision Making for Entrepreneurs (Case Study of Accounting Major Students Faculty of Economics and Business, Udayana University). *International Journal of Management and Commerce Innovations*, 8(2).
- Domi, S., & Domi, F. (2021). The interplay effects of skill-enhancing human resources practices, customer orientation and tourism SMEs performance. *European Journal of Training and Development*, 45(8/9), 737-761.
- Dragan, C. O., Mihai, M., & Rosculete, C. A. (2018, March). Accounting Students' Perceptions of Entrepreneurial Skills as Predictor for Innovation. In *ICIE 2018 6th International Conference on Innovation and Entrepreneurship: ICIE 2018* (p. 125). Academic Conferences and publishing limited.
- Duman, H., Apak, İ., İçerli, M. Y., & Yücenurşen, M. (2013). The Entrepreneurs' Expectations and Satisfaction Level in Today's Accounting Education: A Survey of Aksaray Organized Industrial Zone. *Procedia-Social and Behavioral Sciences*, 103, 1059-1066. <https://doi.org/10.1016/j.sbspro.2013.10.432>
- Eniola, A. A., & Entebang, H. (2016). Financial literacy and SME firm performance. *International Journal of Research Studies in Management*, 5(1), 31-43.
- Eniola, A. A., & Entebang, H. (2017). SME managers and financial literacy. *Global Business Review*, 18(3), 559-576.
- Fasae, F. B. K., & Adeosun, O. A. Restructuring the Business/Accounting Education Curriculum for Sustainable Development: Instilling Entrepreneurial Consciousness into Students in Tertiary Institutions. *International Journal of Humanities Social Sciences and Education*, 8(9), 1-10
- Ghasarma, R., Putri, L., & Adam, M. (2017). Financial Literacy; Strategies and Concepts in Understanding the Financial Planning with Self-Efficacy Theory and Goal Setting Theory of Motivation Approach. *International Journal of Economics and Financial Issues*, 7(4), 182-188.
- Grohmann, A., Kouwenberg, R., & Menkhoff, L. (2015). *Childhood roots of financial literacy. Journal of Economic Psychology*, 51, 114–133. doi:10.1016/j.joep.2015.09.002
- Hanif, H., Rakhman, A., & Nurkholis, M. (2019). The Construction of Entrepreneurial Accounting: Evidence from Indonesia. *Reference to this paper should be made as follows: Hanif, H*, 104-117.
- Henager, R. & Cude, B. J. (2016). Financial Literacy and Long- and Short-Term Financial Behavior in Different Age Groups. *Journal of Financial Counselling and Planning* 27(1), 3-19

- Ibidunni, A. S., Kolawole, A. I., Olokundun, M. A., & Ogbari, M. F. (2020). Knowledge transfer and innovation performance of small and medium enterprises (SMEs): An informal economy analysis. *Heliyon*, 6(8), e04740.
- Jean-Claude, L., Jimmy, F., & Jean-Paul, M. (2018). Entrepreneurial Performance Accounting and Appropriation of Entrepreneurial Ability Evaluation in French Trading SME/VSE. *Annals of Faculty of Economics*, 1(1), 192-203.
- Jegede, O. O. (2020). Dynamics of knowledge diffusion in the informal settings. *Journal of Entrepreneurship Education*, 23(1), 1-20.
- Kanaan-Jebna, A., Baharudi, A. S., & Alabdullah, T. T. Y. (2022). Entrepreneurial Orientation, Market Orientation, Managerial Accounting and Manufacturing SMEs Satisfaction. *Journal of Accounting Science*, 6(1), 1-14.
- Khoza, R., Groenewald, D., & Schachtebeck, C. (2017). Corporate entrepreneurial climate: an investigation of South African accounting small and medium-sized enterprises. *The Journal of Accounting and Management*, 7(3).
- Kovács, L., & Terták, E. (2019). Financial literacy theory and evidence. *Bratislava, Szlovákia: Verlag Deshofer*.
- Kristanto, D. J. (2020). Additional Concept to The Construction of Entrepreneurial Accounting: Evidence from Indonesia. *Kwik Kian Gie*, 1-5.
- Kulathunga, K. M. M. C. B., Ye, J., Sharma, S., & Weerathunga, P. R. (2020). How does technological and financial literacy influence SME performance: Mediating role of ERM practices. *Information*, 11(6), 297.
- Kusumastuti, R., Touriano, D., & Prasetio, P. (2019). Behavioral Accounting Model of Online Shopping Behavior, Risk Perception and Entrepreneurial Orientation of Micro Small and Medium Enterprises (MSME) Creative Economy in Indonesia. In *Proceedings of the 4th Sriwijaya Economics, Accounting, and Business Conference*, 476-483
- Laitinen, E. K. (2014). Influence of management accounting change on performance of small entrepreneurial reorganising firms. *International Journal of Management and Enterprise Development*, 13(2), 164-187.
- Lam, M., Azriel, J., & Swanger, S. L. (2017). The Role of Entrepreneurial Intent and Need for Achievement in Accounting Students' Career Aspirations. *Journal of Higher Education Theory & Practice*, 17(5).
- Laux, V., & Stocken, P. C. (2018). Accounting standards, regulatory enforcement, and innovation. *Journal of Accounting and Economics*, 65(2-3), 221-236.
- Lizote, S. A., Zawadzki, P., & Chaudhuri, M. R. (2021). Entrepreneurial competencies of accounting services firm owners. *Revista Pensamento Contemporâneo em Administração*, 15(4), 70-81.
- Lyons, P., & Bandura, R. P. (2016). Entrepreneurial Intentions of Accounting Students. *Journal of Business & Entrepreneurship*, 28(1).
- Mabula, J. B., & Ping, H. D. (2018A). Use of Technology and SME Managers' Financial Literacy in Developing Economies. In *Proceedings of the 2nd International Conference on E-Education, E-Business and E-Technology*, 145-152.
- Mabula, J. B., & Ping, H. D. (2018B). Financial literacy of SME managers' on access to finance and performance: The mediating role of financial service utilization. *International Journal of Advanced Computer Science and Applications*, 9(9), 32-41.

- Mabula, J. B., & Dongping, H. (2019). SME managers' financial literacy on firm practices in Tanzania. *International Journal of Knowledge Engineering and Data Mining*, 6(4), 376-394.
- Massaro, M., & Bagnoli, C. (2013). Diversification and Entrepreneurial Intention: The Role Of Relatedness In Italian Small And Medium Accounting Practices. *Journal of Strategic and International Studies*, 8, 18-30.
- Mohammed, A. M. (2021). THE ROLE OF CREATIVE ACCOUNTING IN PROMOTING ENTREPRENEURIAL E-COMMERCE FOR COMPANIES. *Academy of Entrepreneurship Journal*, 27(3), 1-10.
- Moreira, M. A., Alves, N. J. F., Andreassi, T., & Braga, J. G. R. (2020). Entrepreneurial Education in Accounting: From Theory To Experiential Learning. *Revista Catarinense da Ciência Contábil*, 19, 1-18.
- Mouritsen, J., & Pflueger, D. (2018). Valuation as Promise and Care: The Use of Accounting in the Entrepreneurial Economy. *HEC Paris Research Paper No. ACC-2018-1255*.
- Mudasih, I., Subroto, W. T., & Susanti, M. S. (2021). The effect of financial literacy, digital literacy, and entrepreneurial learning outcome on entrepreneur behavior of students at SMK Negeri 1 Surabaya. *Technium Soc. Sci. J.*, 15, 303.
- Mukhtar, T., & Evvy, R. N. P. (2017). The role of financial literacy in creative industry growth: women entrepreneur study of Donggala woven fabric industry. *Russian Journal of Agricultural and Socio-Economic Sciences*, 69(9).
- Mustapha, I. K., Zubairu, U. M., & Sakariyau, O. B. (2021). Business Cluster and Entrepreneurship Growth in Nigeria: A Systematic Review. *Journal of Business and Behavioural Entrepreneurship*, 5(1), 92-108. <https://doi.org/10.21009/JOBBE.005.1.06>
- Mustapha, I. K., Sakariyau, O. B., Zubairu, U. & Andow, A. H. (2022). Systematic Literature Review: An overview of Digital Agriculture for Food Sustainability. *International Journal of Entrepreneurship and Business Development*, 5(3) 430-446.
- Mwangi, W. P. & Cheluget, J. (2018). Role of financial literacy, financial innovation, financial inclusion on SME Access to credit in Kenya: A case of Kumisa SACCO. *Journal of Finance and Accounting*, 2(1), 1-18.
- Naradda Gamage, S. K., Ekanayake, E. M. S., Abeyrathne, G. A. K. N. J., Prasanna, R. P. I. R., Jayasundara, J. M. S. B., & Rajapakshe, P. S. K. (2020). A review of global challenges and survival strategies of small and medium enterprises (SMEs). *Economies*, 8(4), 79.
- Ni'matulHoiroh, N. H., Izzah, A., Rokhman, M. T. N., Trisnawati, N. & Perdana, S. (2020). The role of financial literacy, use of accounting information systems, human resources on SME performance. *International Journal of Innovative Science and Research Technology*, 5(12), 710-714.
- Nohong, M., Ali, M., Sohilauw, M., Sobarsyah, M., & Munir, A. (2019). Financial literacy and competitive advantage. SME strategy in reducing business risk. *Revista Espacios*, 40(32).
- Okafor, R. G., & Onwumere, J. U. J. (2012). Issues and challenges in enhancing efficient entrepreneurial accounting education in Nigerian universities. *accounting education (EAE)*, 2(11).

- Okoye, E. I., Uniamikogbo, E. O., & Sunday, A. A. (2017, July). Accounting Skills for Sustainable Entrepreneurial Development: A Study of Selected Small and Medium Scale Enterprises in Edo State, Nigeria. In *The 2017 International Conference on African Entrepreneurship and Innovation for Sustainable Development (AEISD)*.
- Olaoluwa, A. (2021). Agric Crowdfunding: Investors lose billions to fake schemes. *Business Hallmark*. <https://hallmarknews.com/agric-crowdfunding-investors-lose-billions-to-fake-schemes/>
- Oppi, C., Cavicchi, C., & Vagnoni, E. (2020). How does management accounting affect entrepreneurial orientation in SMEs? A structural equation modelling. *Management Control, Sp.1*, 63-78
- Oshi, J. E. O., Akaibe, M. V., Hettey, H. D., & Ezeudenna, E. A. (2018). Accounting information system and entrepreneurial success in SMEs in Rivers State. *Journal of Management Sciences*, 3(1), 6-18.
- Owusu, J., Ismail, M. B., Osman, M. H. B. M., & Kuan, G. (2019). Financial literacy as a moderator linking financial resource availability and SME growth in Ghana. *Investment management and financial innovations*, 16(1), 154-166.
- Passoni, D., & Glavam, R. B. (2018). Entrepreneurial intention and the effects of entrepreneurial education: Differences among management, engineering, and accounting students. *International Journal of Innovation Science*. 10(1),92-107. <https://doi.org/10.1108/IJIS-05-2017-0042>
- Purwidiyanti, W., & Tubastuvi, N. (2019). The effect of financial literacy and financial experience on SME financial behavior in Indonesia. *JDM (Jurnal Dinamika Manajemen)*, 10(1), 40-45.
- Putulowski, J., Ardito, R., & Crosby, R. (2021). A Quantitative Investigation: Applying the 4P's of Marketing to Entrepreneurial Accounting and Tax Preparer Firms. *Technium Social Sciences Journal*, 21, 582-593.
- Radianto, W. E. (2020). Young Entrepreneur, Parental Socioeconomic Status, and Financial Literacy: Does Supply Chain Mediate Entrepreneurship Education?. *International Journal of Supply Chain Management*, 9(4), 317-323.
- Rahmiyanti, F., Pratiwi, R. A., Yuningrum, H., & Muyassarrah, M. (2020). The effects of accounting knowledge, entrepreneurial traits, and subjective norms on the use of accounting information in investment decision making (case study on MSME actors in Gunungkidul Regency). *Journal of Islamic Accounting and Finance Research–Vol*, 2(2).
- Ramesh, A., Dew, N., Read, S., & Sarasvathy, S. D. (2014, January). The mental accounting of resource tradeoffs during the entrepreneurial plunge decision. In *Academy of Management Proceedings, 2014*(1), p. 12141). Briarcliff Manor, NY 10510: Academy of Management.
- Razak, D. A., Hamdan, H. & Uddin, M. N. (2020). The effect of the demographic factors of micro-entrepreneur on financial literacy: case of Amanah Ikhtiar Malaysia (AIM). *International Journal of Business, Economics and Law*, 21(3), 47-56.
- Reyad, S. M. R., Al-Sartawi, A. M., Badawi, S., & Hamdan, A. (2019). Do entrepreneurial skills affect entrepreneurship attitudes in accounting education?. *Higher Education, Skills and Work-Based Learning*. 9(4), 739-757. <https://doi.org/10.1108/HESWBL-01-2019-0013>

- Reyad, S., Badawi, S., & Hamdan, A. (2020). Assessing the impact of entrepreneurial skills development on self-employment practices amongst Egyptian and Bahraini accounting students in public and private universities. *Journal of Islamic Accounting and Business Research*, 11(5), 1101-1120. <https://doi.org/10.1108/JIABR-07-2017-0102>
- Salako, M. A., & Yusuf, S. A. (2016). Cost accounting: A pivotal factor of entrepreneurial success. Online at [https://mpr.ub.uni-muenchen.de/69101/MPRA Paper No. 69101](https://mpr.ub.uni-muenchen.de/69101/MPRA_Paper_No.69101), posted 31 Jan 2016 09:03 UTC
- Samuelsson, J., Andersén, J., Ljungkvist, T., & Jansson, C. (2016). Formal accounting planning in SMEs: The influence of family ownership and entrepreneurial orientation. *Journal of Small Business and Enterprise Development*, 23(3), 691-702. <https://doi.org/10.1108/JSBED-12-2015-0167>
- Sernett, T. (2014). *Why Entrepreneurial Accounting Literacy Matters*. Retrieved from <https://www.linkedin.com/pulse/20140922132144-38444840-why-entrepreneurial-accounting-literacy-matters/>
- Shehab, L. S., Saadallah, H. A. B., & Elshaabany, M. (2021). Does adopting entrepreneurial orientation affect the type of accounting information voluntarily disclosed?. *Journal of Xidian University*, 15(5), 12-33
- Situmorang, P. L., Siregar, F. K., Sitompul, D. H., & Firka, W. (2018). The Relationship between Self-efficacy and Entrepreneurship Learning Achievement with Entrepreneurial Interest of the Eleventh-grade Students of Accounting Major of the Academic Year 2018/2019 at SMK Teladan Pematang Siantar. In Proceedings of the 1st Unimed International Conference on Economics Education and Social Science (UNICEES 2018), pages 152-156
- Swiecka, B. (2018). Financial literacy as a factor of cashless payments development. Results of survey. *European Journal of Service Management*, 27(2), 467-473.
- Swiecka, B. (2019). A theoretical framework for Financial Literacy and Financial Education: In *Financial Literacy and Financial Education* (pp. 1-12). De Gruyter Oldenbourg.
- Szafarska, M., & Matysik-Pejas, R. (2012). Financial Literacy in SME business activity in Poland. 67-80.
- Tanui, P. J. (2020). Relationship between contemporary management accounting practices and entrepreneurial strategies of large enterprises in Eldoret, Kenya. *Hybrid Journal of Business and Finance*, 1(1).
- Thomas, A., & Gupta, V. (2021). Social capital theory, social exchange theory, social cognitive theory, financial literacy, and the role of knowledge sharing as a moderator in enhancing financial well-being from bibliometric analysis to a conceptual framework model. *Frontiers in Psychology*, 12, 664638.
- Utomo, M. N., Cahyaningrum, W., & Kaujan, K. (2020). The role of entrepreneur characteristic and financial literacy in developing business success. *Jurnal Manajemen Bisnis*, 11(1), 26-42.
- Widjaja, M. D. I., & Dermawan, E. S. (2020). The Relationship of Entrepreneurial Soul and Introduction of Information Technology to Understanding of Accounting Information Quality. *Jurnal Bisnis dan Akuntansi*, 22(1), 25-34.

- Wijayanto, S. A., Wahyullah, M. & Aribawa, D. D. (2020). The effect of entrepreneur orientation and financial literacy toward small business enterprises performance in Mataram. *Jurnal Benefita*, 5(3), 352-365.
- Wogboroma, N., & Amesi, J. (2021) Entrepreneurial Accounting Skills Acquisition for Self-Sustainability by Postgraduate Business Education Students in Rivers State. *International Journal of Educational Benchmark (IJEB)*, 20(1), 1-10.
- Xu, R. (2018, August). A Study on the Training Mode of Accounting Innovation and Entrepreneurial Talents Based on "Internet+". In *8th International Conference on Education, Management, Information and Management Society (EMIM 2018)* (pp. 631-635). Atlantis Press
- Ya, I. (2020). Conceptual approaches of accounting organization in corporate entrepreneurial structures of the agricultural sector of Ukraine. *The Scientific Heritage*, (54-5), 34-39.
- Yasin, R. F. F., Mahmud, M. W., & Diniyya, A. A. (2020). Significance of financial literacy among women entrepreneur on halal business. *Journal of Halal Industry & Services*, 3.
- Zaitul, Z., & Ilona, D. (2022). Is Financial Literacy Associated with SME Sustainability During COVID-19? *KnE Social Sciences*, 100-115.
- Zait, A., Berteau, P.E. (2014), Financial literacy - Conceptual definition and proposed approach for a measurement instrument. *The Journal of Accounting and Management*, 3, 37-42.
- Zina, O. (2021). *The essential guide to doing your research project*. Sage.