POLAC INTERNATIONAL JOURNAL OF ECONOMICS AND MANAGEMENT SCIENCE (PIJEMS) DEPARTMENT OF ECONOMICS AND MANAGEMENT SCIENCE NIGERIA POLICE ACADEMY, KANO

ENTREPRENEURIAL BEHAVIOR IN THE LAST DECADE: A SYSTEMATIC REVIEW

Ahmed Abdulkazeem Administrative Department, Federal Medical Centre Bida, Nigeria

Olayiwola Oni, PhD Department of Entrepreneurship and Business Studies,

Federal University of Technology, Minna, Nigeria.

Isah Imam Paiko, PhD Department of Entrepreneurship and Business Studies

Federal University of Technology, Minna, Nigeria.

Umar Mustapha Zubairu, PhD Department of Entrepreneurship and Business Studies

Federal University of Technology, Minna, Nigeria

Abstract

This study systematically reviews issues on Entrepreneurial Behaviour (EB). Entrepreneurial Behaviour is key to innovation, as the entrepreneurial desire for change goes hand in hand with the innovation process and a change in existing institutions and the status quo. This study reviewed some basic issues relating toEB research and adopted a Systematic Assessment Quantitative Technique (SAQT). This study conducted a systematic review of 109EBarticles published over the last decade (2012 - 26th April, 2021). EB articles were from six quality academic databases and were systematically reviewed based on the following headings: time geographical distributions. Article type (Conceptual or Empirical), theories, themes and method of data collection. A significant majority of the papers reviewed were empirical in nature (75%), 82 out of (109)while other papers reviewed were conceptual in nature (25%, 27 out of 109). This suggests more conceptual studies needed to be conducted in order to have scientific knowledge of EB adoption. Research method used was mostly survey method of data collection. The study revealed that large numbers of the articles were published in 2020, with more publications in USA and China, and more of other data collection methods needed to be used to gain additional knowledge on EB.

Keywords: Entrepreneurial Behavior, Systematic Assessment Quantitative Techniques, Systematic review

JEL Classification: L26

1. Introduction

The concept of entrepreneurial behaviour (EB) research describes the individual's creation of a new venture as a planned and deliberate behavior, thus suitable to be studied using intention models (Schlaegel, C. & Koenig, M. 2014). The shared agreement among researchers on entrepreneurship as a planned behavior (Lortie, J., & Castogiovanni, G.2015). Introduces the assumption that intention is a good predictor of future behavior. Empirical evidences of the relationship between the activation of entrepreneurial intention (EI) and subsequent EB of individuals (Kautonen, T., Van Gelderen, M., & Tornikoski, E. T. 2013) have consolidated the validity of such an assumption. The last decades of research on EB have explored the application of different models to identify and describe the potential determinants for an individual's EB (Liñán, F., & Fayolle, A. 2015). Most of this research has, had as a primary focus on how EB is developed, providing clues on why individuals engage in EB (Liñánet al., 2015).

Recent findings from the Global Entrepreneurship Monitor show that EB by employees in organizations is more important than previously thought. Survey output in 52 countries reveals that, while business founding and self-employment are more often found in developing economies, entrepreneurial employee activity is particularly prevalent in advanced economies, and represents an alternative type of entrepreneurship that has been overlooked in official statistics (Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I., 2012).

We have observed that the rates of entrepreneurial activity do not always increase in time; we observed a drop of activity in the US during the years following the global financial crisis recession (Fairlie, R. W. & M. Lofstrom 2016) and more recently in countries like

Spain, where the rate of nascent entrepreneurs has had a negative trend in the last years (Peña, G., Heredia, J. R., Lloret, C., Martín, M., & Da Silva-Grigoletto, M. E. 2016). These evidences suggest that while some individuals become new entrepreneurs, others might decide to abandon their entrepreneurial activity. As a result, the effectiveness of some entrepreneurship promotion initiatives is put in question (Acs, Z. J., Audretsch, D. B., Lehmann, E. E., & Licht, G. 2016).

The presence of a positive perception toward entrepreneurship as a prospective career option could cause individuals to hold a more positive attitude toward starting a business when they are offered with other lucrative jobs (Schlaegelet al., 2014). First, graduates have high human capital and are likely to create growthoriented businesses that are less likely to fail (Rauch &Rijsdijk, 2013). Second, the successful transition from university to self-employment can help prevent graduate unemployment especially in economically challenging times such as the recent economic downturn (Scarpetta, Sonnet, Livanos, Núñez, Riddell, Song, & Maselli, 2012). Despite these benefits, entrepreneurial career choice has received relatively limited attention in vocational and career psychology (Gorgievski, & Stephan, 2016), for a review, exceptions are Moriano, Gorgievski, Laguna, Stephan, and Zarafshani, (2012). This may be because most individuals opt for salaried employment rather than self-employment (Biemann, Cole, & Voelpel, 2012).

Our interest is in understanding entrepreneurship at its very beginning, that is, the occupational choice to become an entrepreneur. By contrast, the abovementioned studies focused on established entrepreneurs and may have been subject to survival bias (Davidsson, 2016). Entrepreneurship has a high failure rate, and certain value types may be systematically associated with failing versus surviving. In addition, entrepreneurs' values may change through processes of occupational socialization. Entrepreneurs have more active jobs (Dijkhuizen, Gorgievski, van Veldhoven, & Schalk, 2014). Given that in some countries, entrepreneurial employee behavior appears to substitute for a lack of business founding and self-employment (Bosma et al., 2012).

Moreover, studies on EB among science and technology graduates is found to be limited (Yıldırım, &Tokalıoğlu, 2016); (Maresch, Harms, Kailer, & Wimmer-Wurm, 2016), which many at times results in lack of robustness, consistency and systematization (Fayolle, Liñán, & Moriano, 2014); (Liñánet al., 2015).

The objective of this paper was to conduct systematic review of the last decade, (2012 -26th April,2021) of EB scholars in order to understand the rate of publication of EB articles over the last decades. The geographic distribution, time distribution of articles, type of articles being published (conceptual versus empirical), theories, data collection methods utilised by these articles, and the various themes explored by these articles.

This study address research gap by conducting a systematic review of EB research.

Papers in this review were sourced from six data bases; Emerald, Elsevier, Sage, Springer, Taylor & Francis and Wiley.

This study is time range as its focuses on articles published between $2012 - 26^{th}$ April, 2021. This particular time line is chosen because the research aims to focus on recent developments in the area. Life its self is dynamic, and human behavior changes as society grows from one stage to another.

The rest of the paper is outline as follows: in section 2, literature was reviewed based on previous systematic review on EB. Section 3, discusses the method and techniques used in conducting the present studies. Section 4, discusses the findings of the studies and also provides research directions for future researchers based on the findings. Section 5, concludes the paper and discusses the limitations of the studies, makes recommendations and suggestions based on the limitations identified.

2. Literature Review

A review of extent EB literature from the six data bases exploited revealed that five systematic reviews were published between $2012 - 26^{\text{TH}}$ April, 2021. (Dakduk, Horst, Santalla, Molina, G., &Malavé, J. 2017); (Langevang, Hansen, & Rutashobya, 2018); (Fisch, & Block, 2018); (Renko, El Tarabishy, Carsrud, & Brännback, 2015).

(Grant & Ferris 2012); (Dijkhuizen, et al., 2014).In conducting a systematic study on EB of stressor sources, identified 31 stressors faced by entrepreneurs, which they distilled into nine categories. These include stress from administration, competition, finance, interpersonal relations, management of the venture and entrepreneur's public image, high responsibility, internal/self-induced fears, uncontrollable factors, and high workload.

(Welsh, R. O., & Little, S. 2018); (Dakduk et al., 2017), in conducting a systematic reviewed in developed countries, women's entrepreneurship has received scholarly attention; however, in emerging nations, such

attention has been limited. Prior studies have addressed the contemporary replacement of offline and online shopping.

(Holmes, Miller, Hitt, & Salmador, 2013); (Langevang et al., 2018) in conducting a systematic review of EB research utilized systematic mobile-device usage, mlearning (Hossain et al., 2019) social networking and entrepreneurship (Hossain, 2019), the acceptance of smartphone-based m-shopping (Hubert, Blut, Brock, Backhaus, & Eberhardt, 2017), variety-seeking among university students (Hossain et al., 2019), women and apparel-based entrepreneurship (Hodges, Watchravesringkan, Yurchisin, Karpova, Marcketti, Hegland, & Childs, 2015), coping with role conflict in entrepreneurial activities (Hundera, Duysters, Naudé, & Dijkhuizen, 2019), navigating institutional complexities (Hossain et al., 2019) m-shopping behavior.

(Fisch et al., 2018) in conducting a systematic review of EB research, the normative context for women's entrepreneurship (Roomi, Rehman, & Henry, 2018), women entrepreneurs in the Indian informal sector (Williams & Gurtoo, 2011), trajectory movement and entrepreneurial tendency (Hossain et al., 2019) factors affecting the success of women's entrepreneurship (Cabrera & Mauricio, 2017; Hossain 2020). The aim of our systematic literature review is to illustrate a concept-centric.

(Cardon & Kirk, 2015; Cardon, Gregoire, Stevens, & Patel, 2013), (Renko et al., 2015) in conducting systematic review of EB research that passion for inventing refers to an individual's intense positive feelings experienced when creating new products and services. We chose to focus on such mechanisms, as seminal work on entrepreneurial leadership has argued that entrepreneurial leaders consider followers in terms of their passion and self-efficacy and enhance followers' beliefs in their skills and abilities and their passion for creativity and innovation.

3. Methodology

In conducting systematic review of the last decade of EB scholarship, this study adopted the Systematic Quantitative Assessment Technique (SQAT) developed by Australian researchers, Pickering & Byrne in 2014. SQAT is systematic in the way articles are assessed determine their inclusion or exclusion in the review process, and focus is on peer-reviewed original journal publications. (Pickering & Byrne, 2014). SQAT enables the researcher to identify "important geographic, scalar, theoretical and methodological gaps in the literature" (Pickering & Byrne, 1024, p. 534). SQAT is logical, simple to use, and easily replicated, which are all important components of a systematic review.

SQAT recommends five important steps in conducting an effective systematic review. Each step and how it was applied in this study are described in the Table 1

Table 1. Description and Application of SQAT

| S/N | Step | Application in current study | | |
|-----|-------------------------------|---|--|--|
| 1 | Define topic | EB (EB) articles published between 2012 and 26th April, 2021 | | |
| 2 | Formulate research question | Five research questions: 1. what is the time distribution of EB articles? 2. In which countries were these articles written? 3. What Kind of EB articles were published? (Conceptual vs. Empirical) 4. What methods were used to collect data? 5. What are the specific themes these articles explored, and what were the major finding in each theme? | | |
| 3 | Identify key words | "EB" | | |
| 4 | Identify and search databases | 6 databases utilized: Emerald, Elsevier, Sage, Springer, Taylor & Francis, and Wiley "All in title search" using the phrase "EB" | | |
| 5 | Real and assess publications | Abstracts of articles found were read to ensure that they were dealing with EB. Literature reviews, book chapters and conference proceedings were not included; only peer-reviewed conceptual and empirical articles. | | |

Source: Author's review.

Table 2 Numbers of Papers Downloaded in Databases

| S/N | Database | Number of Paper |
|-------|------------------|-----------------|
| 1 | Emerald | 22 |
| 2 | Elsevier | 23 |
| 3 | Sage | 9 |
| 4 | Springer | 33 |
| 5 | Taylor & Francis | 12 |
| 6 | Wiley | 10 |
| Total | | 109 |

Sources: Authors review

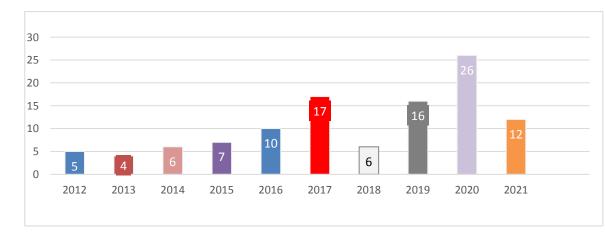
4.0Findings, Discussions and Suggestions for Further Studies

4.1 Time Distribution of Articles on EB (EB)

Based on this study's Sample of 109 articles, published from 2012 –April,26th 2021. The analysis revealed that a peak was reached in 2020 (26 articles) with four articles published 2013 and five articles published in 2012, 6 articles in 2014 and 2018 respectively. Seven articles published 2015, ten articles published 2016, and twelve articles published April, 2021 sixteen articles published 2019 and seventeen articles published 2017.

The systematic reviewed found that EB articles were published in each of the ten years used for this review.



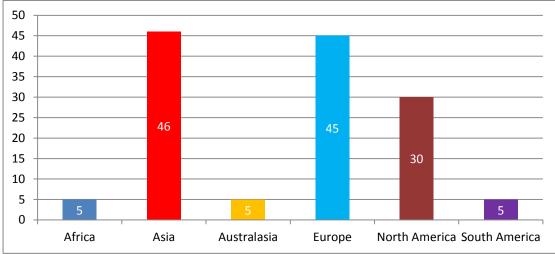


YEARS

Figure 1: Time Distribution of Articles on EB

Source: Author's review





Continents

Figure 2 Geographical Distribution of Articles on EB from 2012-2021

Source: Author's Review

Figure 2 shows that 136 data were obtained from 109 articles reviewed based on the countries. The analysis revealed that the number of data sourced from each continent. The analysis shows that Asia has the highest number of articles published (46), followed by Europe (45), North America (30), Africa, Australasia and South America has (5) respectively.

Africa, Australasia and South America had the least number of studies in this area and this reflect a geographical gap in EB research. It would thus be an important avenue for future EB research to explore nascent cases of EB in various Africa, Australasia and South America countries respectively. Hence future researchers should address this geographical research gap.

From a country perspective, 35 countries were represented in the systematic review of EB research. Figure 3 represents the top three countries where EB research was conducted. The analysis shows that USA is the country with the highest number of articles (46), followed by China (45), then Finland (30).

Top Three Countries by Research on Entrepreneurial Behaviour

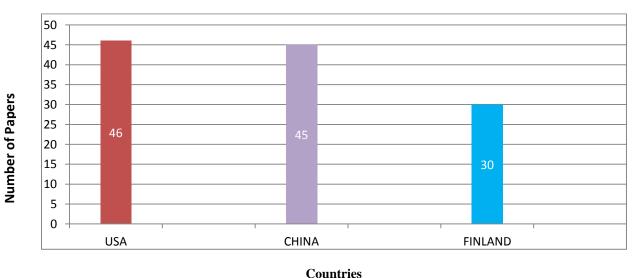


Figure 3. Top three (3) countries by research on EB

Source: Authors' review

Country analysis shows that 35 countries had published EB research and as such, the number is low when compared with the total number of countries in the world. According to worldatlas.com, there are currently 196 countries in the world, including Taiwan (worldmap.2021). A limitation of this study is, it is inclusion of only articles published in English. Nonetheless, many countries are not represented in EB

research and EB is fundamental to the efforts to achieve global sustainable development (United Nation, 2021). Hence, it is important that researchers in all countries conduct EB research. This will identify the level of contribution being made by EB, how positive contribution can be made by EB through more research work.

Table 3: The remaining 32 countries with their numbers of EB articles are represented.

| S/N | Country | No. of Articles | S/N | Country | No. of Articles |
|-----|--------------|-----------------|-----|----------------|-----------------|
| 1 | Pakistan | 2 | 17 | Germany | 5 |
| 2 | England | 1 | 18 | Denmark | 1 |
| 3 | Iran | 5 | 19 | Netherland | 3 |
| 4 | Malaysia | 3 | 20 | Marino | 1 |
| 5 | Saudi | 1 | 21 | Switzerland | 2 |
| 6 | Australia | 3 | 22 | Mexico | 2 |
| 7 | Singapore | 1 | 23 | Washington D C | 1 |
| 8 | Colombia | 1 | 24 | Caroline | 1 |
| 9 | Chile | 1 | 25 | Sri Lanka | 1 |
| 10 | India | 3 | 26 | New York | 1 |
| 11 | Italy | 4 | 27 | Turkey | 1 |
| 12 | Spain | 3 | 28 | Jamaica | 1 |
| 13 | Poland | 1 | 29 | Indonesia | 1 |
| 14 | Romania | 2 | 30 | Argentina | 1 |
| 15 | Vietnam | 1 | 31 | United Kingdom | 1 |
| 16 | South Africa | 2 | 32 | Louisiana | 1 |

Source: Authors' review

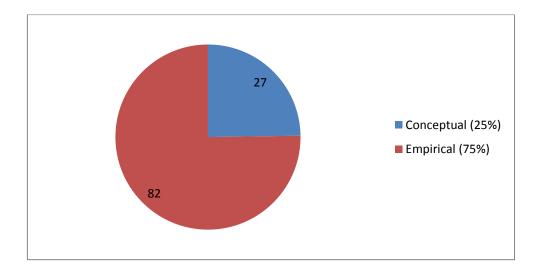


Figure 4: Article Type Breakdown

Source: Authors' review

4.3 Article Type

The 109 articles used in the systematic review were divided into two categories: Conceptual and Empirical. Conceptual articles are those that offer theoretical

discussions on the subject, while empirical articles are those which involve data collection in order to test particular hypothesis in the real world (Patten & Newhart, 2017). Figure 1 shows the breakdown of the

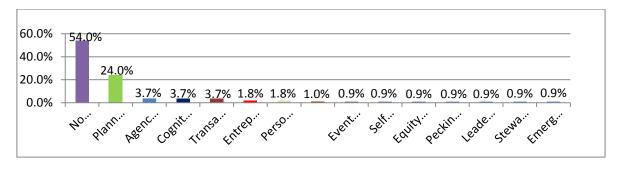
109 Entrepreneurial Behaviour (EB) articles, based on the above classification.

A significant majority of the papers reviewed were empirical in nature (75%, 82 out of 109). As the major amendment to the theory breakdown focus on conceptual studies. However, because of the limited number of the

conceptual EB articles in this review, more conceptual research needs to be done as this contributes to a better understanding of emerging norms and factors. Additional, conceptual research will also provide direction and impetus for future research enquiry into EB (Bikefe, Zubairu, Araga, Maitala, Ediuku, & Anyebe, (2020).

Percentage

Theoretical Breakdown of EB Research



Theories

Figure 5: Empirical Theory Breakdown on EB from 2012- 26th April, 2021

Source: Authors' review

The breakdown revealed that 14 theories were utilized. However, a significant number of papers did not adopt any theories in their analysis (54 percent). The only top four theories applied in EB research are Theory of Planned Behaviour (24%). Agency theory, Cognitive theory and transactional cost theory are 3.7% respectively. Entrepreneurial and personality Theory are 1.8% respectively then social learning theory was 1.0%. The other remaining theories are Event system theory, self-determination theory, Equity theory, pecking order theory, Leadership theory, Stewardship theory and Emerging theory are 0.9% respectively.

A lot of the articles analysed did not adopt any theory, and this further reiterates the need for the publication of more EB conceptual articles. Conceptual articles provide theoretical discussions, which sometimes bring about the emergence of theories. Theories provide guidance for empirical research (Patten & Newhart, 2017).

Theory break down on EB from 2012-26th April, 2021

The theory of planned behavior is seen as the most common approach, which is most relevant and provides predominant specification (Fayolle & Linan 2014). The theory of planned behavior is considered as a key theoretical ground of EB study; however, researches carryout in different contexts can be put together to create a better development model based on TPB in the system of theory about EB (Fayolle & Linan 2014).

Recent research on high-technology ventures has found a strong link between entrepreneurial

leadership and employees' behavior such as job performance more generally (Miao, L., Yang, G., Tao, T., & Peng, Y. 2019). Although some studies have begun examine the direct relationship entrepreneurial leadership and innovative behaviors among employees (Newman, A., Bagheri & Akbari, 2018; Hughes, D. J., Lee, A., Tian, A. W., & Legood, A. 2018)prior work has yet to examine the mediating mechanisms that may explain the influence of entrepreneurial leadership on employees 'innovative behavior. Drawing on social cognitive theory (Bandura 2012), To conceptualize the current study, we integrated elements of social cognitive career theory (Lent & Bornw, 2013).

Agency theory provides mixed insights into the effect of EB, Transactional Cost Economic Theory refines this view by emphasizing the value EB not only as a goal-alignment mechanism but also as an efficient way to economize on family firms' human assets by addressing nonfamily managers' bounded rationality and bounded reliability issues (Chrisman, J., Wright, M., J., Chua, J. H., & Steier, L. P. 2014); (Verbeke & Kano, 2012).

4.5 EB Research Themes

A comprehensive analysis of the 109 EB articles reviewed for this study revealed that four EB were

explored could be classified into four distinct themes: 1.Entrepreneurial Intention (Fayolleet al., 2014;Kautonen et al., 2013;Laspita, Breugst, Heblich, & Patzelt, 2012; Hatak, Harms, & Fink, 2015;Miralles, Giones, & Riverola, 2016), 2. Innovation in EB (Senyard, Baker, Steffens, & Davidsson, 2014;Tülüce, & Yurtkur, 2015; Kang, Solomon, & Choi, 2015;Sarooghi, Libaers, & Burkemper, 2015;Bundy, Pfarrer, Short, & Coombs, W.

T. 2017). 3. Entrepreneurial Leadership (Freeman, Johnson, & Staudenmaier, 2015; Fontana, & Musa, 2017; Huang, Ding, & Chen, 2014; Renko, 2018; Lee, Jeong, Bailey, & McLean, 2020).4. Entrepreneurial Alertness (Lee et al.2020; Montiel Campos, 2017; Adomako, Danso, Uddin, & Damoah, 2016; Gerschewski, Lindsay, & Rose, E. 2016).

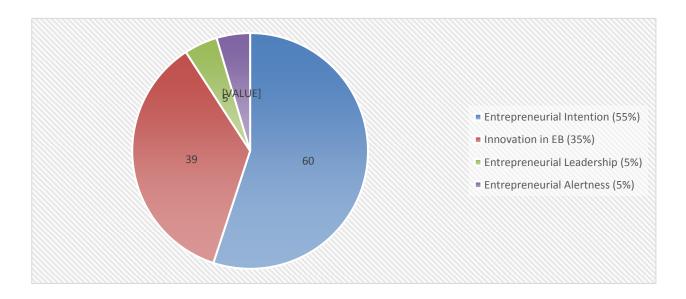


Figure 6: EB Research Themes 2012- 26th April, 2021.

Source: Author's Review

The analysis revealed that the majority of the articles reviewed (55%) explored the entrepreneurial intention based on studies of entrepreneurial intentions that are widely implemented, scholars are still debating about better research models to explain entrepreneurial intentions in the new context (Fayolle & Liñán 2014) highlighted a pressing need to examine the link between intentions and behavior because, as other scholars have affirmed (Kautonen, Van Gelderen, & Tornikoski, 2013; Laspita, Breugst, Heblich, &Patzelt, 2012). Based on an investigation of the Austrian workforce, Hatak et al. (2015) found that as age increases, employees are less inclined entrepreneurially, with their entrepreneurial intention becoming lower as they identify more with their profession. Therefore, the relationship between age and entrepreneurship might have job identification as a moderating factor (Hatak et al., 2015). entrepreneurial intention and behavior are positively influenced by entrepreneurial knowledge (Miralles et al., 2016).

Maâlaoui, A., Mejri, C. A., Lahouel, B. B., & Bertrand, G.(2018) propose three major types of entrepreneurial intentions research: the first comprises studies exploring

the antecedents of intention; the second attempts to explain how entrepreneurial intention can be put into action; and the last develops TPB by extending it with additional dimensions. New research agendas in entrepreneurial intention research are, implementation (Schioedt, 2018), collective intentions intention (Breannback 2018) and the influence of culture (Linan& Jaen, 2018), but it is clear that more research is still merited. There are only few studies examining the intention-behavior link (Kautonen et al., 2015), and a longitudinal follow-up on intention development is restricted usually to only Intention and actual start-up behaviour, a few years and data are gathered usually with two waves (Linan& Rodriguez-Cohard, 2015). Hence, the previous research lacks a wider longitudinal aspect, even though Sheeran & Webb (2016) argue that forming intention can be crucial to securing long-term goals. Entrepreneurial intention is a construct that is widely used in assessing the impacts of entrepreneurial education (Longva& Foss, 2018).

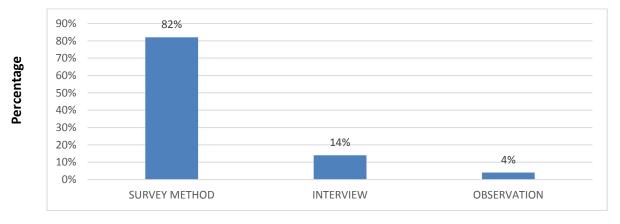
The next most common theme focused on innovation in the EB studies process (35%).Innovativeness was measured by the question, "What is the degree to which you view your firm as being innovative?" and is a covariate of bricolage behaviors (Senyard et al., 2014). Entrepreneurs, according to Tülüce & Yurtkur (2015), take advantage of opportunities and use innovation and technology to achieve advancement in the marketplace. The dearth of research on this subject is particularly evident for entrepreneurial organizations, where innovation is critical for firms' survival and success (Kang et al., 2015). Innovation-related behavior (Sarooghi, Libaers, &Burkemper, 2015), stakeholder management and venture capital acquisition are critical entrepreneurial processes that could be impacted by events and coping with events (Bundy, Pfarrer, Short, & Coombs, 2017).

The second to the last theme among the EB themes is entrepreneurial leadership (5%), and the majority number of studiesonEB have highlighted entrepreneurial leadership as the leadership style and behavior that significantly stimulates and fosters innovation and opportunity recognition in highly challenging, turbulent and competitive environments (Freeman & Siegfried, 2015; Karol, 2015) including new ventures and SMEs (Freeman & Siegfried, 2015; Koryak et al., 2015; Leitch, McMullan, & Harrison, 2013). Yet, few researches have explored the effects of this leadership style on the innovation process and innovation performance of the business (Fontana & Musa, 2017) and research on the impact of entrepreneurial leadership on employees' innovation behavior is scarce (Huang, Ding, & Chen, 2014). Entrepreneurial leadership is a leadership behavior that encourages followers to identify and exploit entrepreneurial opportunities for value creation (Renko, 2018) and thus aims at motivating employees to engage in creative activities (Cai, W., Lysova, E. I., Khapova, S. N., &Bossink, B. A. (2019).

In a recent meta-analytic study, Lee et al. (2020) have indicated that this contemporary and narrowly specified leadership style is more strongly related to employee innovative behavior as compared to other traditional and moral forms of leadership. Although few studies have investigated the effect of entrepreneurial leadership on employee innovative behaviour (Bagheri, A., & Harrison, C. 2020; Miao et al., 2018; Newman et al., 2018); In recent years, one such approach to leadership that researchers have identified is entrepreneurial leadership (Freeman & Siegfried, 2015; Karol, 2015; Leitch, C. M., McMullan, C., & Harrison, R. T. 2013), especially in the challenging, uncertain and competitive environment faced by high-technology new ventures (Chen, S., Rotaru, A. E., Liu, F., Philips, J., Woodard, T. L., Nevin, K. P., & Lovley, D. R. 2014).

The last theme on EB is entrepreneurial alertness (5%). Alertness deriving from passion may foster entrepreneurs' proactiveness and their ability to detect new possibilities emerging in the market (Cardon et al., 2013). Therefore, passion could affect individual entrepreneurial orientation through enhanced "entrepreneurial alertness," which is their capacity to identify treats to the venture (Montiel Campos, 2017), and entrepreneurs' dynamism, which is the speed at which an entrepreneur can develop new solutions to new problems or exploit new situations (Adomako et al., 2016. Gerschewski et al. 2016).

4.6 Data Collection Methods



Data Collection Methods

Figure 7: Data collection Method Utilized by Empirical articles reviewed on EB

Source: Author's Review

Figure 7 showed that survey was the highest data collection method utilized (82%) (Doanh, & Bernat, 2019; Dao, Bui, Doan, Dao, & Le, 2021; Cadenas, Cantú, Lynn, Spence, & Ruth, 2020; Neto, Rodrigues, & Panzer, 2017), followed by interview (14%) (Holley, A. C., & Watson, J. 2017; Hermes, & Mainela, 2014; Van der Loos, Haring., 2013; Monllor, Pavez, & Pareti, 2020). Observation (4%) (Bailey, 2013; Bernardus, 2020).

Majority of EB research used survey, it has its advantages and disadvantages for example, the survey

method can be useful in covering all aspects of a topic from the questions offered to respondent but can lead to dishonest in answering the questions administered (Smith, M. W., Then, Wor, Ralph, Pollock, & Hoenig, 2012). Future study should explore the use of other methods. It is observed that most of the papers reviewed adopted survey research methods. Future EB research can combine two or more research methods.

TABLE 4. Summary of Findings of Review of 109 EB Articles

| S/N | Heading | Key findings | Implications |
|-----|-------------------------------|---|--|
| 1 | Time distribution (2012-2021) | EB articles were published every year in the last decade (2012-2021). A significant number of the articles were published in 2020 | EB research is getting more attention from scholars over the year |
| 2 | Geographical distribution | This review identified 109 EB articles from 35 countries. On the geographical distribution, EB articles are largely concentrated in Asia while South America, Australia, and Africa has been largely ignored. USA had the highest number of EB articles among the distributing countries. | There is a need for more EB research in South America, Australia and Africa and other nations of other countries that currently has no representation. |
| 3 | Article type | The majority of the articles reviewed were empirical in nature while minority were conceptual articles. | More conceptual EB research is encouraged in balancing the wide gap between empirical and conceptual articles. |
| 4 | Data collection methods | This review identified four methods of data collection (i.e Survey, interview, secondary data and observations). Survey was the most utilized method over the last decade. | More qualitative methods of data collection should be encouraged to have more understanding of the concepts. The researchers are also advised to adopt the mixed methods of data collection. |
| 5 | EB Themes | Four different themes were identified (i.e Entrepreneurial intention, innovation, entrepreneurial leadership and entrepreneurial alertness) | Entrepreneurial intention is most investigated theme. Scholars are encouraged to carry out more research on the consequences of entrepreneurial leadership and entrepreneurial alertness. |

Source: Author's Review.

5. Conclusion and Recommendations

This paper reviewed 109 peer-reviewed journal articles on EB. The articles were examined based on six key elements, including the time distribution of the articles, geographical distribution of the article, article type, theories used, research theme, and research methods. The

results from the review were analysed and discussed to serve as a guidance to future EB researchers. There is still significant room for more conceptual research in this area. There is no research without limitations, these limitations are the gaps future research can explore. The limitations will be discussed on the following headings; time-bound, the use of title search, language, and the use

of phrase to search for the articles. Firstly, the study is time bound, only articles published in 2012 and later years were used. Future researchers may inculcate earlier years to have more practical ideas.

The second limitations are that this study used title search in six databases. (Emerald, Elsevier, Sage, Springer, Taylor & Frances, and Wiley). Future systematic review can widen the scope of databases to broaden EB researches.

Third limitation is that only English journal articles were included in the review and excluded books and conference proceedings. This was done to maintain the quality as stipulated by the SQAT methodology. Future researchers can explore books and conference

Reference

- Abbasianchavari, A., & Moritz, A. (2021). The impact of role models on Entrepreneurial intentions and behavior: a review of the literature. *Management Review Quarterly*, 71(1), 1-40.
- Afsar, B., Badir, Y.F., Saeed, B.B., & Hafeez, S. (2017). Transformational and transactional leadership and employee's Entrepreneurial Behaviorin knowledge—intensive industries. *The International Journal of Human Resource Management*, 28(2), 307-332.
- Agraz-Boeneker, G.M., & del Mar Fuentes-Fuentes, M. (2018). Heterogeneity and the Origin of the Founding Team: How the Concepts Relate and Affect Entrepreneurial Behavior. In *Entrepreneurship and the Industry Life Cycle* (pp. 33-58). Springer, Cham.
- Agyapong, A., Maaledidong, P.D., & Mensah, H.K. (2021). Performance outcome of Entrepreneurial Behavior of SMEs in a developing economy: the role of international mindset. *Journal of Strategy and Management*.
- Akter, A., Rana, S.S., & Ramli, A.J. (2020). Factors influencing social Entrepreneurial Behavior: evidence from a developing nation. *International Journal of Ethics and Systems*.
- Ali, J., & Jabeen, Z. (2020) Understanding Entrepreneurial Behavior for predicting start-up intention in India: Evidence from global entrepreneurship monitor (GEM) data. *Journal of Public Affairs*, e2399.
- Al-Jubari, I., Hassan, A., & Liñán, F. (2019). Entrepreneurial intention among University students in Malaysia: integrating self-determination theory and the theory of planned behavior. *International Entrepreneurship and Management Journal*, 15(4), 1323-1342.

proceedings to widen the knowledge obtainable in EB research.

Fourth limitation is that a title word search was utilized rather than a key word search. This is because phrases are precise in providing information about EB. However, a key word search would have produced a greater number of articles for the review.

However, despite that limitations discussed for this study it is still important to note that this study is useful asit provides a clear picture on the current state of EB research and has provided guides for future researchers in order to widen their knowledge on the adoption of EB around the world and for better application of EB.

- Amorim Neto, R.D.C., Picanço Rodrigues, V., Campbell, K., Polega, M., &Ochsankehl, T. (2020, April). Teamwork and Entrepreneurial Behavior among K-12 Teachers in the United States. In *the Educational Forum* (Vol. 84, No. 2, pp. 179-193). Routledge.
- Bagheri, A. (2017). The impact of Entrepreneurial leadership on innovation work behavior and opportunity recognition in high-technology SMEs. *The Journal of High Technology Management Research*, 28(2), 159-166.
- Bagheri, A., Newman, A., & Eva, N. (2020). Entrepreneurial leadership of CEOs and employees' innovative behavior in high-technology new ventures. *Journal of Small Business Management*, 1-23.
- Bailey, A., & Ngwenyama, O. (2013). Toward Entrepreneurial Behavior in underserved communities: An ethnographic decision tree model of telecenter usage. *Information Technology for Development*, 19(3), 230-248.
- Belchior, R.F., & Lyons, R. (2021). Explaining Entrepreneurial intentions, nascent Entrepreneurial Behavior and new business creation with social cognitive career theory—a 5-year longitudinal analysis. *International Entrepreneurship and Management Journal*, 1-28.
- Bernardus, D., Murwani, F.D., Ardyan, E., Padmawidjaja, L., Aji, I. D. K., Jatiperwira, S. Y., ... &Hermanto, Y. B. (2020). Which psychological characteristics strengthen "The Entrepreneurial intention-action relationship"?: An extension of the theory of planned behavior. *Cogent Business & Management*, 7(1), 1823579.
- Bird, B., & Schjoedt, L. (2017). Entrepreneurial Behavior: Its nature, scope, recent research, and agenda for future research. *Revisiting the Entrepreneurial mind*, 379-409.

- Blanchard, K. (2017). Rural and remote SMEs' innovative behavior: Is it in the genes or location? An examination of Entrepreneurial traits and characteristics. *Strategic Change*, 26(4), 301-309.
- Carayannis, E.G., & Stewart, M.R. (2014). Obsessed maniacs and clairvoyant oracles: Empirically validated patterns of Entrepreneurial Behavior. In *Entrepreneurial Profiles of Creative Destruction* (pp. 131-159). Palgrave Macmillan, London.
- Carsrud, A., Brännback, M., Elfving, J., & Brandt, K. (2017). Motivations: The Entrepreneurial mind and behavior. In *Revisiting the Entrepreneurial mind* (pp. 185-209). Springer, Cham.
- Clinton, E., & Gamble, J. R. (2019). Entrepreneurial Behavioras learning processes in a transgenerational Entrepreneurial family. In *Entrepreneurial Behavior*(pp. 237-260). Palgrave Macmillan, Cham.
- Collins, J. D., McMullen, J. S., & Reutzel, C. R. (2016). Distributive justice, corruption, and Entrepreneurial Behavior. *Small Business Economics*, 47(4), 981-1006.
- Croonen, E.P., Brand, M.J., &Huizingh, E.K. (2016). To be Entrepreneurial, or not to be Entrepreneurial? Explaining differences in franchisee Entrepreneurial Behavior within a franchise system. *International Entrepreneurship and Management Journal*, 12(2), 531-553.
- Daim, T., Dabic, M., & Bayraktaroglu, E. (2016). Students' Entrepreneurial Behavior: international and gender differences. *Journal of Innovation and Entrepreneurship*, 5(1), 1-22.
- Damian, D., & Empoli, G. (2021). Exploring Freelancers' Intentions to Embrace an Entrepreneurial Career Based on Theory of Planned Behavior. *Journal of Promotion Management*, 1-16.
- Dao, T.K., Bui, A.T., Doan, T.T.T., Dao, N.T., Le, H.H., & Le, T.T.H. (2021). Impact of academic majors on Entrepreneurial intentions of Vietnamese students: An extension of the theory of planned behavior. *Heliyon*, 7(3), e06381.
- Davidsson, P., Baker, T., & Senyard, J.M. (2017). A measure of Entrepreneurial bricolage behavior. *International Journal of Entrepreneurial Behavior & Research*.
- Dávila, F.A.M. (2019). Relationship Lending and Entrepreneurial Behavior: Analyzing Empirical Evidences. In *Business Governance and Society* (pp. 321-347). Palgrave Macmillan, Cham.
- Doanh, D.C., & Bernat, T. (2019). Entrepreneurial self-efficacy and intention among Vietnamese students: A meta-analytic path analysis based on the theory of planned behavior. *Procedia Computer Science*, *159*, 2447-2460.

- Elfving, J., Brännback, M., & Carsrud, A. (2017). Motivations matter in Entrepreneurial Behavior: Depends on the context. In *Revisiting the Entrepreneurial Mind* (pp. 211-217). Springer, Cham.
- Fernando, M.S.J., & Nishantha, B. (2019). Impact of social learning on Entrepreneurial Behavior: Case of entrepreneurship education at state sector universities in Sri Lanka. *Entrepreneurship Education*, 2(3), 171-188.
- Fleaca, E., Fleaca, B., &Maiduc, S. (2017). Modeling stakeholders' relationships to strengthen the Entrepreneurial Behavior of higher education Institutions. *Procedia Engineering*, *181*, 935-942.
- Gielnik, M.M., Frese, M., Bischoff, K.M., Muhangi, G., & Omoo, F. (2016). Positive impact of entrepreneurship training on Entrepreneurial behaviour in a vocational training setting. *Africa Journal of Management*, 2(3), 330-348.
- Gieure, C., del Mar Benavides-Espinosa, M., & Roig-Dobón, S. (2020). The Entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*, 112, 541-548.
- Gorgievski, M.J., Stephan, U., Laguna, M., & Moriano, J.A. (2018). Predicting Entrepreneurial career intentions: values and the theory of planned behavior. *Journal of career assessment*, 26(3), 457-475.
- Gruber, M., & MacMillan, I.C. (2017). Entrepreneurial Behavior: A reconceptualization and extension based on identity theory. *Strategic Entrepreneurship Journal*, 11(3), 271-286.
- Gupta, A., Str Entrepreneurial Behavior, C., Gupta, V. K., & Markin, E. (2015). Entrepreneurial Behavior during industry emergence: An unconventional study of discovery and creation in the early PC industry. *New England Journal of Entrepreneurship*.
- Hossain, S.F.A., Nurunnabi, M., Hussain, K., & Shan, X. (2020). Smartphone-based m-shopping behavior and innovative Entrepreneurial tendency among women in emerging Asia. *International Journal of Gender* and Entrepreneurship.
- Iqbal, A., Nazir, T., & Ahmad, M.S. (2020). Entrepreneurial leadership and employee innovative behavior: an examination through multiple theoretical lenses. European Journal of Innovation Management.
- Jabeen, F., & Faisal, M.N. (2018). Imperatives for improving Entrepreneurial Behavior among females in the UAE. *Gender in Management: An International Journal*.

- Kang, J. H., Matusik, J.G., Kim, T.Y., & Phillips, J.M. (2016). Interactive effects of multiple organizational climates on employee innovative behavior in Entrepreneurial firms: A cross-level investigation. *Journal of Business Venturing*, 31(6), 628-642.
- Kautonen, T., Van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting Entrepreneurial intentions and actions. *Entrepreneurship theory and practice*, 39(3), 655-674.
- Khorrami, M., Farhadian, H., & Abbasi, E. (2018). Determinant competencies for emerging educators' Entrepreneurial Behavior in the Institute of Agricultural Applied-Scientific Education, Iran. *Journal of Global Entrepreneurship Research*, 8(1), 1-11.
- Lavelle, B.A. (2019). Entrepreneurship education's impact on Entrepreneurial intention using the theory of planned behavior: Evidence from Chinese vocational college students. *Entrepreneurship Education and Pedagogy*, 2515127419860307.
- Michaelis, T.L., Carr, J.C., Scheaf, D.J., & Pollack, J.M. (2020). The frugal entrepreneur: a self-regulatory perspective of resourceful Entrepreneurial Behavior. *Journal of Business Venturing*, *35*(4), 105969.
- Miralles, F., Giones, F., &Gozun, B. (2017). Does direct experience matter? Examining the consequences of current Entrepreneurial Behavior on Entrepreneurial intention. *International Entrepreneurship and Management Journal*, 13(3), 881-903.
- Mustafa, M., Martin, L., & Hughes, M. (2016). Psychological ownership, job satisfaction, and middle manager Entrepreneurial Behavior. *Journal* of Leadership & Organizational Studies, 23(3), 272-287.
- Ozaralli, N., & Rivenburgh, N.K. (2016). Entrepreneurial intention: antecedents to Entrepreneurial Behavior in the USA and Turkey. *Journal of Global Entrepreneurship Research*, 6(1), 1-32.
- Pati, R., Ghobadian, A., Nandakumar, M.K., Hitt, M.A., & O'Regan, N. (2021). Entrepreneurial Behavior and firm performance: The mediating role of business model novelty. *R&D Management*.
- Petrakis, P.E., & Konstantakopoulou, D.P. (2015). Entrepreneurial Behavior and Foresight. In

- *Uncertainty in Entrepreneurial Decision Making* (pp. 75-93). Palgrave Macmillan, New York.
- Pinheiro, R., Horta, H., & Charles, D. (2014). Symposium on Leadership and Entrepreneurial Behavior in Turbulent Times.
- Roy, R., Akhtar, F., & Das, N. (2017). Entrepreneurial intention among science & technology students in India: extending the theory of planned behavior. *International Entrepreneurship and Management Journal*, 13(4), 1013-1041.
- Sahinidis, A.G., Stavroulakis, D., Kossieri, E., & Sdrolias, L. (2019). Using the Theory of Planned Behavior and the Big Five Personality Trait Model in Predicting Entrepreneurial Intention: A Comparison Study of the Two Models. In Strategic Innovative Marketing and Tourism (pp. 245-251). Springer, Cham.
- Teague, B.T., & Gartner, W.B. (2017). Toward a theory of Entrepreneurial Behavior. *The Wiley Handbook of Entrepreneurship*, 71-94.
- Usaci, D. (2015). Predictors of professional Entrepreneurial intention and behavior in the educational field. *Procedia-Social and Behavioral Sciences*, 187, 178-183.
- Van der Loos, M.J., Haring, R., Rietveld, C.A., Baumeister, S. E., Groenen, P. J., Hofman, A., & Thurik, A. R. (2013). Serum testosterone levels in males are not associated with Entrepreneurial Behavior in two independent observational studies. *Physiology &behavior*, 119, 110-114.
- Wang, M., Cai, J., Soetanto, D., & Guo, Y. (2021). Why do academic scientists participate in academic entrepreneurship? An empirical investigation of department context and the antecedents of Entrepreneurial Behavior. *Journal of Small Business Management*, 1-32.
- Yasir, M., & Majid, A. (2017). Entrepreneurial knowledge and start-up behavior in a turbulent environment. *Journal of Management Development*.
- Zollo, L., Rialti, R., Tron, A., & Ciappei, C. (2020). Entrepreneurial passion, orientation and behavior: the moderating role of linear and nonlinear thinking styles. *Management Decision*.