



EXPLORING THE AFFORDABLE LOSS PRINCIPLE: A SYSTEMATIC LITERATURE REVIEW

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ABSTRACT

Objective: This article investigates how academic research in business and management approaches the Affordable Loss Principle (ALP) concept. We identify what researchers observed from the ALP lens, what they found, and which conclusions they reached to develop a future research agenda. **Method:** This study analyzes 51 recent research articles through a systematic literature review to evaluate the current state and developments in the domain of ALP. **Main Results:** Using the VOSviewer software, the articles are clustered into three groups of primary subjects. The Performance cluster examines how ALP and effectuation influence company performance. The Motivation cluster delves into the motivational aspects behind decision-making processes in businesses. The Assessment cluster focuses on validating measurement scales for effectuation logic, particularly in the context of ALP. **Relevance / Originality:** The study underscores the critical role of ALP in fostering resilient and adaptive entrepreneurial strategies in uncertain business environments. It highlights the distinctive approach of ALP in encouraging entrepreneurs to engage in risk management strategies that focus on potential losses rather than maximum possible gains. **Theoretical / Methodological Contributions:** This article contributes significantly to the scholarly understanding of effectuation logic by providing a comprehensive framework of the current research landscape around ALP. It aids emerging researchers by mapping the existing literature and suggesting future research directions. In addition, it offers practical insights into implementing effectuation principles, particularly ALP, in entrepreneurial practices, thereby enhancing decision-making in dynamic and unpredictable markets.

Keywords: Affordable Loss Principle. Effectuation Logic. Systematic Literature Review.

EXPLORANDO O PRINCÍPIO DA PERDA SUPORTÁVEL: UMA REVISÃO SISTEMÁTICA DE LITERATURA

RESUMO

Objetivo: Este artigo investiga como a pesquisa acadêmica em negócios e gestão aborda o conceito do princípio da perda suportável. Identificamos o que os pesquisadores observaram do ponto de vista do princípio da perda suportável, o que eles encontraram e a quais conclusões chegaram para desenvolvermos uma agenda de pesquisa futura. **Método:** Este estudo analisou 51 artigos de pesquisa recentes por meio de uma revisão sistemática da literatura para avaliar o estado atual e os desenvolvimentos do princípio da perda suportável. **Principais Resultados:** Utilizando o *software* VOSviewer, os artigos são agrupados em três grupos de assuntos primários. O *cluster* Desempenho examina como o princípio da perda suportável e a efetivação influenciam o desempenho da empresa. O *cluster* Motivação investiga os aspectos motivacionais por trás dos processos de tomada de decisão dos empreendedores. O *cluster* Avaliação centra-se na validação de escalas de medição para a lógica de efetivação, particularmente no contexto do princípio da perda suportável. **Relevância / Originalidade:** O estudo destaca o papel do princípio da perda suportável na promoção de estratégias empreendedoras resilientes e adaptativas em ambientes de negócios incertos. Destaca a abordagem do princípio da perda suportável ao incentivar os empreendedores a se envolverem em estratégias de gestão de risco que se concentram nas perdas potenciais, e não nos ganhos possíveis. **Contribuições Teóricas / Metodológicas:** Este artigo contribui significativamente para a compreensão acadêmica da lógica *effectuation*, fornecendo uma estrutura abrangente do cenário atual de pesquisa em torno do princípio da perda suportável. Auxilia pesquisadores emergentes pela literatura existente e sugere direções de pesquisas futuras. Além disso, oferece *insights* práticos sobre a implementação de princípios de *effectuation*, particularmente princípio da perda suportável, melhorando assim a tomada de decisões em mercados dinâmicos e imprevisíveis.

Palavras-chave: Princípio da Perda Suportável. Lógica *Effectuation*. Revisão Sistemática de Literatura.

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INTRODUCTION

Effectuation Theory, which was developed by Sarasvathy (2001), proposes two distinct entrepreneurial processes: causation and effectuation. In the causation process, which is dominant in the entrepreneurial literature (Dew, Read, Sarasvathy, & Wiltbank, 2009; Sarasvathy, 2001), the entrepreneur starts with the idea of forecasting, where the future is the continuity of the past (Sarasvathy, 2001). In the effectuation process, the entrepreneur recognizes the inherent uncertainty in the business environment and presents a decision-making model focused on an uncertain future (Dew et al., 2009; Sarasvathy, 2001). In uncertain situations, proactive agents generate new opportunities by transforming accessible means into new goals (Sarasvathy, 2001).

However, literature evolved organically, without differentiating the principles that underscore the processes, especially the five principles involved in the effectuation logic. While substantial scholarly attention has been directed toward understanding the dichotomy of causation and effectuation within entrepreneurial processes, the nuanced underpinnings of effectuation still need to be explored, particularly the five core principles that define its process. This gap around the Affordable Loss Principle (ALP) is a yet underexplored component of effectuation that offers new insights into risk management and decision-making under uncertainty. Although previous studies have laid foundational knowledge, they often treat these principles without a deep differentiation or integration into broader entrepreneurial contexts. In this article, we investigate how academic research in business and management approaches the ALP concept.

Over time, researchers have developed studies that evaluate the theory from different perspectives (Dias, Sadao Iizuka, & Vilas Boas, 2020; Grégoire & Cherchem, 2020; Karami, Wooliscroft, & McNeill, 2019). Some researchers have studied the two processes together (Chandler, DeTienne, McKelvie, & Mumford, 2011; Garrido, Vasconcellos, Faccin, Monticelli, & Carpenedo, 2021; Henninger, Brem, Giones, Bican, & Wimschneider, 2020), while others focused on the effectuation process, emphasizing its principles (Melinda, Sutanto, & Christian, 2015; Nyoni & Moos, 2022; Welter & Kim, 2018). Previous studies have focused on explaining the five effectuation principles.

They have focused on explaining the five principles of effectuation detailed by Sarasvathy (2001), which make up the logic: a bird in the hand, affordable loss, crazy quilt, lemonade, and pilot in the plane.

In summary, a Bird in the Hand Principle suggests that the entrepreneur start their venture with the available resources, answering the questions “Who am I?,” “What do I know?,” and “Who do I know?” (Sarasvathy, 2001; Wiltbank, Read, Dew, & Sarasvathy, 2009). With the ALP, entrepreneurs base their investment decisions on what they can afford to lose rather than expected returns (Dew, Sarasvathy, Read, & Wiltbank, 2009; Sarasvathy, 2001; Wiltbank et al., 2009). Partnerships are explained based on the Crazy-Quilt Principle, where the entrepreneur forms pre-commitments (Grégoire & Cherchem, 2020; Sarasvathy, 2001; Wiltbank et al., 2009). The Lemonade Principle suggests that entrepreneurs should take advantage of uncertainties and contingencies, while, finally, the pilot-in-the-plane principle focuses on activities within their control (Sarasvathy, 2001; Wiltbank et al., 2009). An effectual worldview is rooted in the belief that the future is not found nor predicted but made (Klenner, Gemser, & Karpen, 2022).

Gradually, researchers focus on profoundly understanding specific principles (Grégoire & Cherchem, 2020; Melinda et al., 2015). Within the effectuation logic, the ALP plays an important role (Karami et al., 2019). The ALP can transform initial means into valuable resources and is present in the first group of antecedents, where the entrepreneur’s initial decision-making occurs (Dew et al., 2009; Karami et al., 2019). In the context of the effectuation logic, ALP refers to how entrepreneurs assume risks positively and reduce or distribute risks (Dew et al., 2009; Roach, Ryman, & Makani, 2016). Therefore, ALP refers to the entrepreneur finding some way to reach new markets with small expenditures instead of calculating expected returns (Dew, Sarasvathy, et al., 2009; Sarasvathy, 2001, 2008). Instead of focusing only on the returns of a new venture and its maximization, entrepreneurs who follow the effectuation logic consider the maximum possible loss, adopting accessible strategies instead of optimal ones (Daniel, Di Domenico, & Sharma, 2015).

The critical point is that risk decisions may vary, depending on each individual’s perception of ALP (Dencker, Bacq, Gruber, & Haas, 2019; Sarasvathy,

2001) and the objectives defined by management or entrepreneurs (Crick & Crick, 2016). Fisher (2012) suggests that perceptions often alter, and the ALP influences the circumstances faced by the respective decision-makers, including their resources. The relationship between ALP and strategies for the creation or growth of enterprises has been a vast field of study since the publication of Dew et al. (2009) and has been growing steadily.

The importance of studies on ALP lies in its approach to dealing with the uncertainty inherent in the business environment. While traditional approaches focus on maximizing returns and minimizing risks, ALP proposes a different perspective, where entrepreneurs evaluate what they are willing to risk and what they can affordably lose on their investments. With ALP, entrepreneurs act more effectively in turbulent environments, promoting more informed and adaptive decision-making, encouraging the exploration of opportunities in a bolder manner, and contributing to company resilience in an increasingly dynamic and unpredictable business world. Then, this article investigates how academic research in business and management approaches the ALP concept.

Entrepreneur decision-making has become an increasingly important research area, as evidenced by recent studies (Bai, Johanson, Oliveira, & Ratajczak-Mrozek, 2021). Since Sarasvathy's initial publications, there has been a growing interest in effectuation logic (Karami et al., 2019). Researchers seek to understand each effectuation principle in detail (Karami et al., 2019; Martina, 2020). Therefore, it is essential to thoroughly understand the current state of the art in ALP literature. By conducting a systematic literature review of the most recent research in ALP, we contribute to the ongoing discussion about how effectuation logic and ALP can enhance entrepreneurial decision-making.

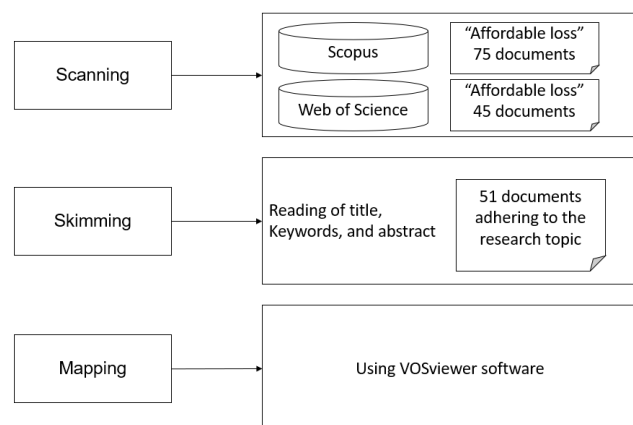
The findings of our systematic literature review allow us to classify into three primary clusters. Our coding process identified these clusters as Performance, Motivation, and Assessment. First, the Performance cluster focuses on analyzing the performance of companies through the lenses of ALP and Effectuation. Second, on the contrary, the Motivation cluster examines performance and considers the underlying motivation behind companies' decision-making processes. Finally, the Assessment cluster attempts to

validate the creation of measurement scales for effectuation logic, particularly in the context of ALP.

After a deeper analysis of each cluster, our contribution provides a comprehensive framework that includes all the components analyzed by the articles and proposes an agenda of research trends for future studies. This framework is a valuable resource for researchers in this area of study and can help to understand the existing literature and guide future explorations. We structured the article as follows: after the introduction with the concepts of the ALP theme, the next session is the method, in which we describe the research design. In the results analysis session, we conducted an in-depth analysis of the 51 articles found. Finally, the discussion session brings the conclusions of the article, covering the study's limitations and, mainly, the future research agenda.

1. METHOD

In this study, we adopt a systematic literature review process suggested by Hart (1998) and Machi and McEvoy (2022). We followed the steps described by Machi and McEvoy (2022), as represented in Figure 1. Scanning is "An organized search of online and bricks-and-mortar libraries, catalogs, subject-area encyclopedias, periodical indexes, and abstracts. The scan aims to identify works for possible inclusion in the study" (Machi & McEvoy, 2022, p. 74). For the Scanning phase of our methodology, we conducted an extensive search in the Scopus and Web of Science databases. The term "affordable loss" was used as the search criterion in all documents within the fields



Source: Developed based on Machi and McEvoy (2022).

Figure 1. Steps of the systematic literature review.

of Business, Management, and Accounting in Scopus and Business Economics in Web of Science. We did not impose any restrictions regarding language, publication type, or start year, with the end year set as 2023. This initial search showed 75 documents in Scopus and 45 in Web of Science, totaling 120 documents before checking for duplicates.

Subsequently, we went Skimming. Skimming is “a rapid perusal and listing of possible works to identify important ideas and their specific contribution to the research study and to determine whether or not to use the word” (Machi & McEvoy, 2022, p. 74). In the Skimming phase, we analyzed the titles to eliminate duplicates, such as documents in both databases. Following the title analysis, we reviewed the abstracts and keywords, refining our selection to 51 documents relevant to the research topic. These selected documents were all found in the Scopus database, which we adopted for data input and analysis in the software in the following research phase.

Finally, we began the code creation process. The mapping process is “A technique that organizes the results of skimming to put the topic story together, building the core idea and author maps and cross-referencing them” (Machi & McEvoy, 2022, p. 74). The 51 selected articles were present in both databases. To facilitate the coding and analysis of articles using the software, we selected the articles in the Scopus database and downloaded the file with the data. Furthermore, we downloaded all articles for examination and cluster analysis.

At the first moment, we did the mapping process using the VOSviewer software. As Donthu, Kumar, Mukherjee, Pandey and Lim (2021, p. 286) point out in their studies, the emergence of scientific databases such as “Scopus and Web of Science made it relatively easy to acquire large volumes of bibliometric data, and bibliometric software such as Gephi, Leximancer, and VOSviewer allow the analysis of such data in a very pragmatic way.” The VOSviewer software was used in systematic literature review works in the area of business and management (see Camillo, Vasconcellos, & Amal, 2020; Kumar, Sureka, Lim, Kumar Mangla, & Goyal, 2021; Steinhäuser, Paula, & Macedo-Soares, 2021), facilitating the codification and analysis of the works obtained.

The next step was the bibliographic coupling (BC) analysis. We used BC to identify theoretical trends,

following the co-citation analysis. Co-citation analysis helps to identify “high-density areas” in a network of citations by grouping highly co-cited documents and generating clusters (Braam, Moed, & van Raan, 1991). A co-citation cluster represents a base where the main concepts or methods that researchers belonging to the cluster built (Small, 1973). This systematic approach maps out the existing research landscape and sets the stage for identifying new avenues of inquiry in the study of entrepreneurial decision-making under uncertainty. Following the bibliometric analysis using the VOSviewer software, we comprehensively read all 51 selected articles. This thorough review encompassed a detailed examination of each article’s objectives, methodologies, key findings, and suggested future research agendas. We meticulously cataloged these critical elements and extensively debated them in the discussion section of our paper. This structured approach ensures a deep and nuanced understanding of the current research landscape regarding the ALP in entrepreneurship, providing a robust foundation for our analysis and future studies in this evolving field.

2. RESULTS

The selected articles were distributed from 2011 to 2023, illustrating the evolution of research within the field. Figure 2 charts the distribution of articles published annually, indicating a growing interest in the topic. The earliest relevant publication post-Dew et al. (2009) was in 2011, the article by Chandler et al. (2011) that aims to measure the logic of causation and effectuation. Among the 51 articles analyzed, a notable finding is that only five specifically address the theme of the ALP, as seen in works by He, Li and Zhang (2023), He and Li (2023), Hunt, Song, Townsend and Stallkamp (2021), Martina (2020), and Reddy (2023). This result underscores ALP’s nascent yet underexplored nature within the broader effectuation framework, highlighting significant potential for future research.

As research focus intensifies, we observe that specific studies on ALP are emerging. Table 1 details the prolific authors in this area. The authors with the most articles are David Crick from the University of Ottawa and James M. Crick from the University of Leicester, with multiple publications primarily focusing on international entrepreneurship.

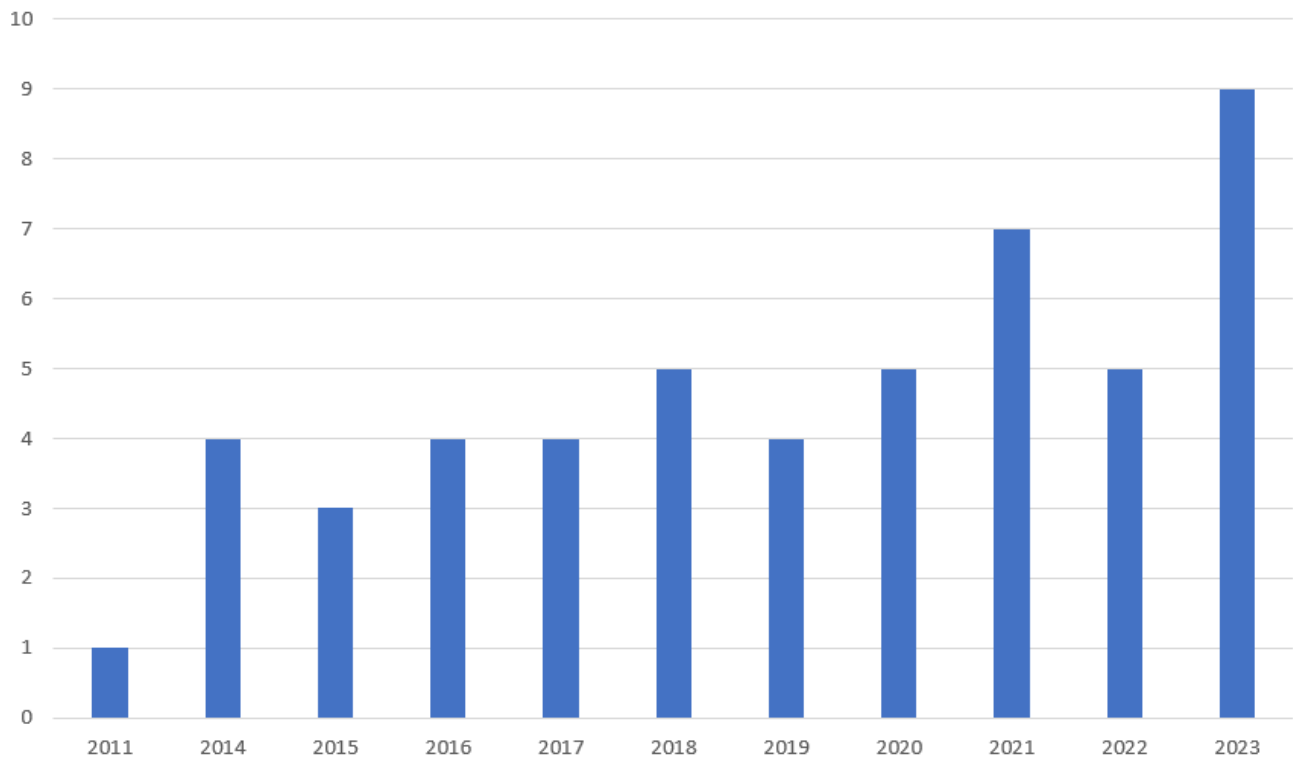


Figure 2. Number of articles published about ALP.

Table 1. Authors and publications.

Author	University	Articles
David Crick	University of Ottawa	4
James M. Crick	University of Leicester	4
Ioanna Deligianni	Athens University of Economics and Business	3
Richard Hunt	Virginia Tech—Strategy & Entrepreneurship	2
Yue Song	San Diego State University	2
Dan Long	School of Management—Hefei University of Technology	2

Source: Elaborated by the authors.

Further analysis using BC helped us visualize the main links between documents. As depicted in Figure 3, the VOSviewer software generated three clusters from the 51 articles, mapping them in a two-dimensional space. Articles positioned closer together signify stronger thematic connections, facilitating the formation of distinct thematic clusters.

Therefore, by examining the position of articles in the two-dimensional space, we can gain insights into the connections and relationships between different themes and topics in the articles. Using the VOSviewer software, we organized the articles into clusters, which is a visualization tool that identifies

related groups of articles based on their similarities. The clusters provide a helpful overview of the different research areas represented in the articles and can help to identify patterns and trends in the research. Each cluster was named based on the dominant theme of its constituent articles. The first cluster, “Performance,” is red in Figure 3 and includes studies integrating effectuation logic, particularly ALP, to assess various aspects of venture performance. Notable contributions within this cluster examine the implications of ALP on internationalization performance, innovation, and company strategies in uncertain environments.

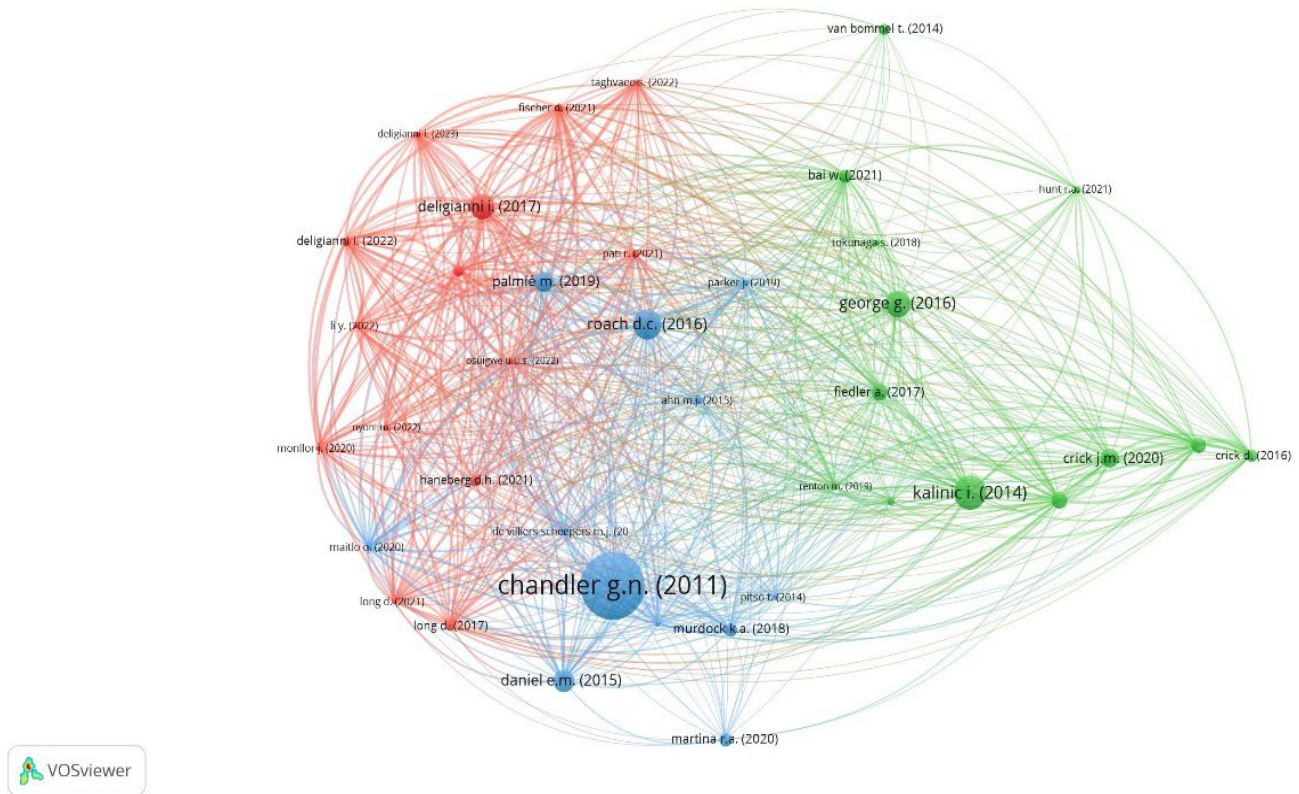


Figure 3. Clusters developed by the VOSviewer software.

The second cluster, “Motivation,” is shown in green and comprises articles that scrutinize the motivational factors influencing entrepreneurs through the lens of ALP. This cluster includes investigations into processes of internationalization and innovation. Finally, highlighted in blue, the “Assessment” cluster focuses on developing and validating measurement frameworks for studying ALP and its effects. This cluster balances qualitative and quantitative studies, with Chandler et al. (2011) being the most cited work, emphasizing the empirical measurement of causation and effectuation logic principles. Table 2 shows the main objective of each cluster. Also, we detailed the most important results of the articles.

In the Performance cluster, for example, Deligianni (2023) analyzes internationalization performance from the perspective of the ALP principle the company’s performance in environments of uncertainty (Fischer, Greven, Tornow, & Brettel, 2021; Haneberg, 2021; Long, Wang, & Wang, 2021; Monllor, Pavez, & Pareti, 2020), and other studies analyze the ALP and innovation sectors (Li, Zou, Guo, & Guo, 2022; Nyoni & Moos, 2022). The article with the most connec-

tions is the work by Deligianni, Voudouris and Lioukas (2017). Ioanna Deligianni is the author who has done the most work in this cluster. She works at the Athens University of Economics and Business, and her research focuses on Human Resource Management (HRM) in small- and medium-sized enterprises (SMEs). Of the articles present in this cluster, only two are qualitative works with multiple case studies (Henninger et al., 2020; Monllor et al., 2020), and the other articles are quantitative, with populations ranging from 103 SMEs (Haneberg, 2021) and 724 small business owners (Nyoni & Moos, 2022), both using structural equation modeling (SEM) to analyze the collected data.

In the Performance cluster, the main findings show that experimentation, ALP, flexibility, and pre-commitments are positively related to innovation and R&D of enterprises (Deligianni, Sapouna, Voudouris, & Lioukas, 2022; Haneberg, 2021; Li et al., 2022), to performance and enterprise diversification (Deligianni et al., 2017; Fischer et al., 2021; Osuigwe & Eresia-Eke, 2022), internationalization (Deligianni, 2023) and strategies related to environ-

Table 2. Main objective in each cluster.

Cluster	Objective	Authors
Performance	The studies apply the effectuation lens and examine the effectuation process in a given enterprise performance process.	Deligianni et al. (2017); Henninger et al. (2020); Long et al. (2017, 2021); Nyoni and Moos (2022); Osuigwe and Eresia-Eke (2022)
	The studies evaluate the company's performance in creating and developing innovation based on the effectuation process.	Deligianni et al. (2022); Li et al. (2022)
	The studies apply the effectuation lens and examine the company's international performance.	Deligianni (2023)
	The studies apply the effectuation lens and examine company performance in times of uncertainty.	Fischer et al. (2021); Haneberg (2021); Monllor et al. (2020); Taghvaei and Talebi (2022)
Motivation	The studies investigate the motivation and performance implications of effectual internationalization.	Bai et al. (2021); Hunt et al. (2021)
	The studies investigate the effectuation logic of decision-making in the first internationalization process.	Crick and Crick (2015); Crick and Crick (2016); Crick et al. (2020)
	The studies evaluate the motivations related to the entrepreneur's behavior in different effectuation processes.	Fiedler et al. (2017); George et al. (2016); Renton and Simmonds (2019); Tenor (2019); Tokunaga et al. (2018); Van Bommel et al. (2014)
	The studies investigate unplanned internationalization's motivation and performance implications with the effectuation lens.	Kalinic et al. (2014)
Assessments	The studies develop and validate measures of causation and effectuation approaches.	Chandler et al. (2011)
	The studies develop and validate measures of Causation and Effectuation approaches to analyze specific firms and processes deeply.	Ahn et al. (2015); Daniel et al. (2015); De Villiers Scheepers, Boshoff, and Oostenbrink (2018); Murdock and Varnes (2018); Palmié, Huerzeler, Grichnik, Keupp, & Gassmann (2019); Pitso and Lebusa (2014)
	The studies combine measures developed and validated from effectuation approaches with new scales to develop a new measuring method.	Frigotto and Della Valle (2018); Maitlo, Pacho, Liu, Bhutto and Xuhui (2020); Parker, Corner, Woodfield and Singh (2019); Roach et al. (2016)
	The paper develops an elaborated process model of the AL heuristic in effectuation.	Martina (2020)

ments of uncertainty (Haneberg, 2021; Henninger et al., 2020; Long, Xia, & Hu, 2017; Pati, Ghobadian, Nandakumar, Hitt, & O'Regan, 2021; Taghvaei & Talebi, 2022), and the financial sector of the company (Nyoni & Moos, 2022). The studies brought outstanding contributions to both the ALP literature and studies of SMEs.

For example, articles in the Motivation cluster investigate processes of internationalization (Bai et al., 2021; Hunt et al., 2021) and innovation (Van Bommel,

Mahieu, & Nijssen, 2014). The author with the most articles in this cluster is David Crick, who works at the University of Ottawa and has international entrepreneurship as their primary research topic. The article with the most connections is by Kalinic, Sarasvathy and Forza (2014), entitled "Expect the Unexpected": Implications of Effectual Logic on the Internationalization Process." Only four articles in this cluster are quantitative works; the others are qualitative works with multiple case studies and one single case study

(Renton & Simmonds, 2019). In clusters 1 and 2, the researchers are interested in analyzing companies' strategies using the lens of ALP.

The findings in the articles belonging to the Motivation cluster are related to the motivation factors that may or may not affect the strategies involving ALP and their respective results. For example, studies have found factors that can influence the company's internationalization (Bai, Johanson, Oliveira, Ratajczak-Mrozek, & Francioni, 2022; Crick & Crick, 2015, 2016; Kalinic et al., 2014). On the one hand, some factors influence the business model, interrelationships, and intracompany (Crick & Crick, 2018; Fiedler, Fath, & Whittaker, 2017; George, Kotha, Parikh, Alnuaimi, & Bahaj, 2016; Tenor, 2019; Tokunaga, Martinez, & Crusat, 2018; van Bommel et al., 2014). On the other hand, there are factors related to teams and managing internal companies (Crick, Crick, & Chaudhry, 2020; Hunt et al., 2021; Renton & Simmonds, 2019). Future research related to cluster Motivation analyzes factors related to the company's or entrepreneur's strategies and ALP. In addition to conducting research merging the studies of cluster Motivation, more qualitative studies can be carried out to understand the primary factors and how the company or entrepreneur can better plan strategies.

Finally, in the Assessment cluster, the articles frame the creation and validation of measurement frameworks and others (see Table 2). The most cited article is by Chandler et al. (2011), whose main objective is to measure the causation and effectuation logic principles. The articles arranged in the Assessment cluster aimed to generate a metric or create a research framework. As a result, future research can develop and merge measurement and collection instruments to generate new quantitative and qualitative research to understand the factors found in quantitative research more deeply. With the analyses, we realized that the field of studies on the principle of ALP is wide. The studies show relevant findings for the literature and the business sector. Future research can deeply analyze the ALP factors that corroborate business strategies generating more significant income and performance for the company. As a relatively new field, research focusing exclusively on ALP has excellent growth potential, whether in performance and motivation studies or in combining new scales for measuring and validating the ALP principle.

To assist researchers aiming to delve into studies on the ALP, we have devised a comprehensive framework, as represented in Figure 4, which encompasses all the components analyzed across each cluster. This ALP

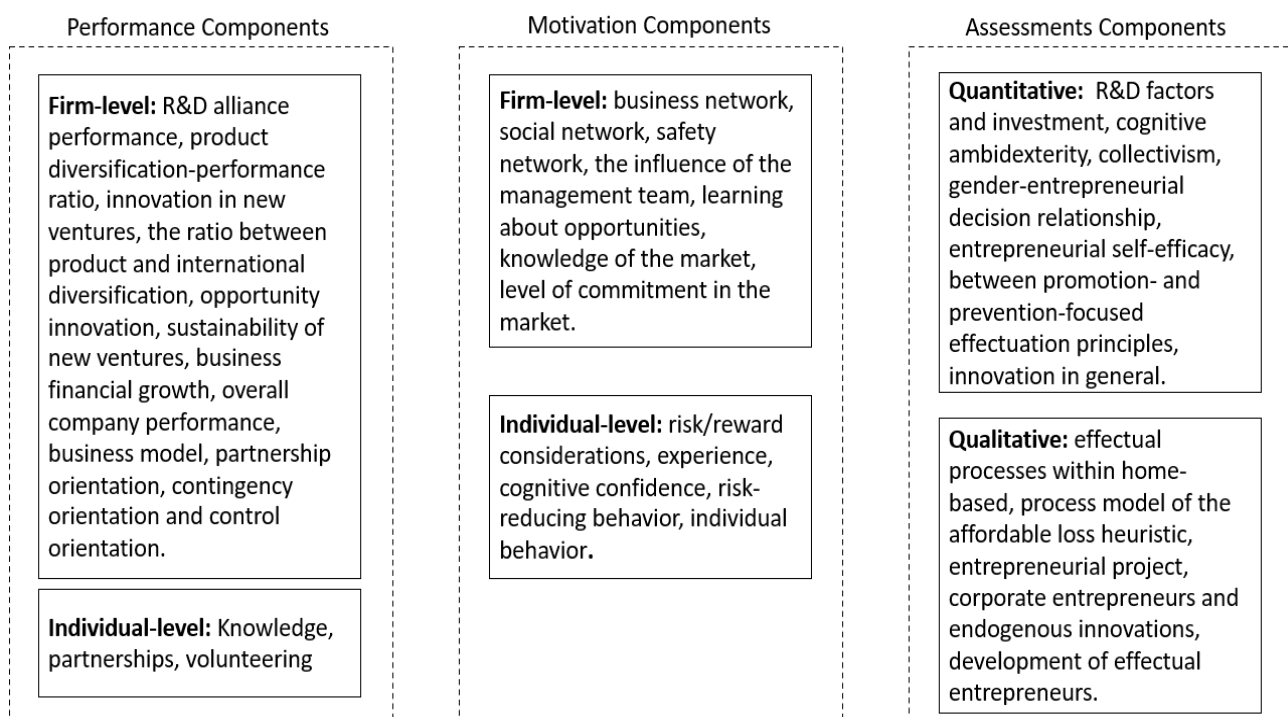


Figure 4. Model of components already analyzed.

Components Framework is a valuable guide, depicting ALP research and directing future scholarly inquiries.

The framework categorizes the findings into three primary areas: Performance Components, Motivation Components, and Assessment Components. In the Performance Components, the research scrutinizes how companies apply effectuation logic, particularly ALP, to enhance business outcomes. For instance, studies by Deligianni et al. (2017, 2022) and Long et al. (2017) demonstrate that integrating ALP with elements such as experimentation and flexibility can variably impact enterprise performance, influencing areas from innovation to diversification strategies. Deligianni et al. (2017, 2022) found evidence that the components of effectuation, experimentation, ALP, and flexibility are related to the performance of the enterprise. The ALP principle was related to different components to evaluate the companies' performance, thus generating positive and negative effects on the analyzed components. As an example, on the one hand, the ALP exerts a negative effect on the diversification–performance relationship (Deligianni et al., 2017).

On the other hand, the ALP is positively related to the innovation of new ventures (Deligianni et al., 2022). Other combinations, such as ALP and innovation, were used to analyze the performance of companies. Relating ALP to innovation capacity, Long et al. (2017) argue that entrepreneurs are likelier to use ALP and leverage contingency. These analyses reveal the positive and negative effects of ALP on business performance metrics.

The Motivation Component focuses on the drivers behind entrepreneurial and corporate decision-making processes. This cluster includes analyses of how motivation influences actions in internationalization and innovation (e.g., Bai et al., 2022; Hunt et al., 2021). Studies in this cluster investigate the implication of motivation and performance in internationalization and the effectuation logic of decision-making in the first process of planned and unplanned internationalization. In addition, some studies evaluate the motivations related to the entrepreneur's behavior in different hiring processes. In our framework, we subdivided the influential components related to Motivations into firm-level and individual-level. At the firm level, the most analyzed components in conjunction with the ALP were networks, social networks (e.g., Bai

et al., 2022), business networks (e.g., Bai et al., 2022), and safety networks (e.g., Hunt et al., 2021). A component explored at the individual level was the risk/reward considerations (e.g., Crick & Crick, 2015), and analyzed at the individual level was the risk/reward considerations. The risk/reward considerations were significant in each manager's assessment (Crick & Crick, 2015, 2016). With the risk/reward assessment using the lens of the ALP, decision-making was carried out positively and helped to facilitate the decision to accept the first foreign order (Crick & Crick, 2016).

Finally, the Assessment Component of the framework highlights the development and use of scales and measurements in ALP research. Some articles use existing scales and measurements and develop quantitative articles, while others use more in-depth analysis and qualitative research. For this reason, we separated the components of this group into quantitative and qualitative. In the quantitative research group, we have, for example, the work by Ahn, York, Wu, Suharto and Daim (2015) that investigates the relationship between ALP and R&D, merging scales already used in previous works to obtain a new result. In the qualitative research group, Daniel et al. (2015) analyze the principles of effectuation logic in online stores. Our framework aims to provide a comprehensive overview of a range of research components, pinpointing potential directions for further inquiry. It facilitates the development of complementary studies that build upon the reviewed articles, enabling researchers to explore uncharted aspects of ALP research. By offering a structured roadmap for future research, this framework significantly enriches the dialogue around ALP and equips researchers with the tools to advance this field effectively.

As we synthesize the findings from the broader review, it is crucial to highlight the contributions of five pivotal studies that focus exclusively on ALP. The studies of He and Li (2023), He et al. (2023), Hunt et al. (2021), Martina (2020), and Reddy (2023) represent a significant concentration of research effort directly addressing the nuances of ALP. These five studies reveal a rich and multifaceted approach to exploring how entrepreneurs deal with uncertainty and resource constraints when starting new ventures or going international. Starting with Martina (2020), he develops a detailed procedural model that breaks down the concept of ALP into two components: abil-

ity and willingness, mediated by loss aversion. After deepening the understanding of these nuances in the Caribbean context, Martina (2020) highlights the complexity of initial investment decisions based on potential ALP.

In an internationalization context, Hunt et al. (2021) demonstrate how ALP, combined with objective options judgment, helps entrepreneurs create opportunities and minimize the negative impacts of trading partner opportunism. The practical applicability of ALP in market entry decisions reveals how this strategy can be crucial for navigating between opportunity and opportunism in international markets. He and Li (2023), in turn, explored how the entrepreneurial implementation goal can be translated into subsequent actions, with an ALP as a significant mediator in this process. The research highlights that environmental uncertainty moderates levels in this relationship, emphasizing the importance of context in the applicability of ALP. This study adds an important dimension, showing how uncertainty conditions influence ALP's effectiveness in motivating real entrepreneurial action.

He et al. (2023) advanced this discussion by comparing loss aversion with ALP, revealing that, although both influence the transition from innovation to entrepreneurial action, acceptable loss has a more decisive role in facilitating this transition, suggesting that ALP may be a more effective tool for overcoming the psychological barriers to risk that often prevent entrepreneurs from acting. Finally, Reddy (2023) studies ALP in an even broader context by considering the economic well-being of entrepreneurial families. This study breaks new ground by linking decisions about what ALP is to the economic conditions of the entrepreneur's household, showing how the ability to withstand losses is directly affected by financial resources and basic material needs. Together, these studies emphasized the need to consider contextual and individual factors when assessing entrepreneurs' willingness and ability to tolerate risks and losses.

3. DISCUSSION

After conducting a systematic literature review of 51 articles from the Scopus database, we have discerned that the state of research on the ALP remains nascent. As identified in the "Results" section, our

analysis categorized these articles into three main clusters: Performance, Motivation, and Assessments. These clusters encompass qualitative and quantitative studies, each examining different facets influenced by ALP, such as company performance and motivation, and efforts to create and validate scales for measuring ALP.

From the detailed analysis, it became clear that researchers focus on how ALP affects various business processes. For example, in the Performance cluster, studies investigate the impact of ALP on company performance during internationalization and research and development initiatives. On the contrary, the Motivation cluster delves into understanding the drivers behind companies' initial moves toward internationalization. Meanwhile, the Assessments cluster has begun pioneering efforts to measure ALP quantitatively, enhancing the precision of its application in research.

With the insights gained, we developed a framework that integrates the components analyzed in the reviewed articles, providing a structured map for future research. This effort clarifies current understandings and opens vast avenues for future investigations. Consequently, the field offers substantial opportunities for quantitative and qualitative research, as captured in our proposed research agenda across the three clusters: Performance, Motivation, and Assessment (refer to Table 3). Each theme suggests specific areas of focus, such as exploring different company sizes and environments of uncertainty in the Performance cluster, as well as deeper examinations of motivational factors in the Motivation cluster. Table 3 highlights the main ideas for future research. The research agenda has a basis on the questions proposed in the articles analyzed in this systematic literature review.

The three leading suggestions regarding the Performance cluster are to investigate different sizes of companies and different levels inside the companies, to research companies inserted in environments of uncertainty, and to develop studies on entrepreneurial behavior and company performance. Following this topic, studying beyond successful companies is crucial to researching failed ventures (Deligianni, 2023; Deligianni et al., 2017). Studies at the individual level have also been suggested. For example, adopting a vision of the entrepreneur's previous experience can generate more profound research (Deligianni et al., 2022; Fisch-

Table 3. Future research agenda.

Cluster	Research Agenda	Authors
Performance	<p>As for the company's size, they highlighted the importance of studying the context of startups and the difference in decision-making between micro-, small-, and medium-sized established companies. Compare companies with different growth patterns and understand which firm-level factors affect the adoption of the effectuation process in younger companies.</p> <p>Focus on other contexts that share similar characteristics to new ventures, such as scarce resources, uncertainties, and lack of experience in diversification—determining the role of uncertainties in the relationship between product performance and marketing orientation.</p> <p>Explore entrepreneurial behavior with other business model attributes (e.g., scalability and compatibility) and the influence of entrepreneurial behavior on factors such as diversification and internationalization. Conduct studies to understand how effectuation shapes entrepreneurial cognition, focusing on understanding experimentation, flexibility, and pre-commitments.</p>	<p>Deligianni (2023); Fischer et al. (2021); Henninger et al. (2020); Pati et al. (2021); Taghvaei and Talebi (2022)</p> <p>Deligianni (2023); Taghvaei and Talebi (2022)</p> <p>Deligianni (2023); Pati et al. (2021)</p>
Motivation	<p>Study the motivations that lead entrepreneurs to start the company's internationalization process.</p> <p>Understanding how opportunity seeking varies across categories of individuals helps provide a micro-foundation approach.</p> <p>Research the motivation of other participants, such as investors, in the processes under analysis.</p> <p>Deeper investigation of entrepreneurs' perception of risk/reward.</p>	<p>Bai et al. (2022); Crick et al. (2020); Hunt et al. (2021)</p> <p>Crick and Crick (2018)</p> <p>Crick et al. (2020)</p> <p>Crick and Crick (2018); Hunt et al. (2021)</p>
Assessments	<p>Future research might examine whether other dimensions of effectuation distinguish this process from causation processes.</p> <p>Include ventures initially perceived as high growth by their founders.</p> <p>Future studies should involve inexperienced entrepreneurs using the same variables to increase generalizability.</p>	<p>Chandler et al. (2011)</p> <p>Daniel et al. (2015)</p> <p>Maitlo et al. (2020)</p>

er et al., 2021) and understand how to adopt the effectuation process between genders (Henninger et al., 2020). Long et al. (2017) highlighted that researchers should conduct studies to improve how to measure the effectuation process in general.

The research suggestions regarding the Motivation cluster are to investigate the motivations that lead entrepreneurs to start the process of internationalization of the company, how opportunity seeking varies across categories of individuals, the motivation of other participants in the processes under analysis, and deeper investigation of entrepreneurs' perception of risk/reward. In this second cluster, the indication of new research is to study the motivation of entrepreneurs in which companies failed in their processes (George et al., 2016). Hunt et al. (2021) suggest that new studies can include institutional factors linked to

entrepreneurial motivations in future research, with a view from the lens of the ALP. Crick et al. (2020) emphasize the importance of different methods for a deeper understanding of the themes and validating ways of measuring the ALP.

The research agenda for the last cluster includes suggestions for the following components for creating new measurements: other dimensions of effectuation that distinguish this process from causation processes, include ventures initially perceived as high growth by their founders, and involve inexperienced entrepreneurs using the same variables tested with experienced entrepreneurs. Martina (2020) is a study that draws attention, as it has suggestions for future research directly aimed at ALP. Future studies may further investigate the components of ALP, ability, and willingness (Martina, 2020).

Some research suggestions appeared in all three clusters:

- the importance of conducting longitudinal studies (Bai et al., 2022; Martina, 2020; Pati et al., 2021);
- conducting research in different countries and cultural combinations (Daniel et al., 2015; Fischer et al., 2021; Hunt et al., 2021);
- developing qualitative and quantitative studies in more depth (Deligianni, 2023; Fiedler et al., 2017).

Based on this, we generally suggest to the researchers consider using both quantitative and qualitative methods to collect data and gain a complete understanding of the phenomenon they are studying and consider focusing on a specific industry or sector relevant to your research question. This discussion synthesizes the current landscape of ALP research and sets the stage for future scholarly endeavors, providing a robust foundation for advancing this field of study.

CONCLUSION

Our systematic literature review has achieved its objective of investigating how academic research in business and management approaches the ALP concept. Analysis of the 51 articles reveals that ALP research is still in the beginning, offering substantial opportunities for further investigation across various contexts. We identified three primary clusters—Performance, Motivation, and Assessment—wherein qualitative and quantitative methods have been applied to assess the impact of ALP on entrepreneurial and organizational decision-making. This review not only spotlights the need for longitudinal studies, cultural variations exploration, and mixed method approaches but also suggests the potential benefits of interdisciplinary research focused on specific industries or sectors to deepen our understanding of ALP.

Effectuation principles, particularly experimentation, ALP, flexibility, and pre-commitments, generally promote positive outcomes in new ventures by enhancing performance and fostering innovation. However, the influence of ALP can vary, showing negligible effects in some contexts, highlighting the complex dynamics of applying these principles in practice. This variability suggests that established companies may benefit from adopting effectuation broadly to

enhance flexibility and adaptability in strategic decision-making. Integrating ALP with other effectuation principles crucially affects performance and opportunity recognition in academic entrepreneurship and international diversification domains.

Our article has some limitations. We started the analysis with articles from the Scopus and Web of Science databases but decided to use only the Scopus database due to the duplication of articles. Using the Scopus and Web of Science databases makes it impossible to identify all works published in the area, no matter how to complete the databases. In addition, the method of selecting articles and the filter used for the scanning process, which included reading all selected articles in the databases, may have excluded some essential papers on different unidentified topics. The grouping method may have also created a bias in identifying themes, as different ones could emerge from other configurations performed in the VOSviewer software.

However, these limitations did not prevent our study from providing significant contributions. The study shows the nuanced application of effectuation principles and paves the way for future research to explore these dynamics more deeply. Forthcoming studies can build on our findings by focusing on specific sectors and employing diverse methodologies to enhance the theoretical and practical understanding of ALP in entrepreneurial settings. We believe that the framework we developed with the components of the analyzed articles can help researchers carry out their research questions and study object development processes (firm level or individual level).

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