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Review article

Research trends on business strategy formulation: A systematic literature review and bibliometric analysis

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ARTICLE INFO

ABSTRACT

Survival in the modern technological landscape demands an effective competitive strategy for every industry, and the offset printing sector is no exception. This study explores trends and future research opportunities in strategy formulation within this specific industry. We utilized a Systematic Literature Review (SLR) methodology complemented by bibliometric analysis. Relevant literature was gathered from sources such as Sciencedirect.com and Publish or Perish version 8, using keywords like "models," "formulation strategies," and "offset printing." Our initial search covered 1,000 articles published between 2014 and 2024. Through a careful screening process, we selected 50 key articles for in-depth evaluation, focusing on their theoretical approaches, applied models, and research methodologies. The analysis revealed two main research streams: quantitative studies often using meta-analysis, and qualitative studies employing comparative cases or in-depth interviews. The field shows diverse models for strategy formulation. Based on our review, we identify 3D printing technology and business model innovation as significant avenues for future research. The bibliometric findings also strongly suggest that offset printing companies should explore integrating new technologies, such as 3D printing, and adopt more flexible, adaptive business models to maintain a competitive edge in today's rapidly changing market.

1. Introduction

A recurring theme in various industries is the development of initiatives to enhance company performance in an increasingly uncertain business environment [1]. Every company must address this challenge due to intense competition, making it crucial to formulate effective business strategies tailored to each industry. Extensive research on strategy formulation has provided valuable literature that supports both the development and implementation of business strategies [2]. The successful execution of these strategies requires involvement at all levels of management, from top executives to operational teams [3].

Today, many companies, including those in the offset printing industry, are seeking new strategic approaches. The rapid advancement of digital technology has forced several offset printing businesses to shut down and transition to digital printing [4]. A study conducted across 45 cities in the United States revealed that many local newspapers have ceased

operations, shifting from traditional print to digital platforms [5]. This transition presents both challenges and opportunities, pushing the newspaper industry to adopt new technologies and business models [6], [7]. Despite the growing dominance of digital platforms, data from various sources, including the Central Bureau of Statistics, indicate an increase in the number of projects and investment value in the printing industry [8], [9]. This suggests that while the offset printing sector faces significant threats, it still holds potential for growth and sustainability.

This study aims to identify emerging trends and potential future research directions in strategy formulation using the Systematic Literature Review (SLR) method and bibliometric analysis, with a particular focus on the offset printing industry. Beyond identifying trends and research gaps, this study seeks to explore alternative strategies that can help the offset printing industry maintain a competitive advantage in an increasingly dynamic market. The strength of this research lies in its structured methodology—SLR and bibliometric analysis—which provide a more objective

and comprehensive review of existing literature. These approaches are crucial for understanding the latest developments in business strategy formulation for the offset printing industry.

2. Material and method

This research on business strategy formulation employs a systematic literature review method, integrating bibliometric analysis. The first step in the literature review process involves collecting journal articles from open-source search engines, specifically ScienceDirect and Publish or Perish (version 8, Google Scholar). The keywords used in the search include model, formulation strategy, and offset printing. The reviewed journals and international conference proceedings were published between 2014 and 2024.

The literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) framework. Meanwhile, bibliometric analysis, conducted to identify potential future research directions, utilizes VOSviewer software. Fig. 1 illustrates the stages of the systematic review process and bibliometric analysis used in this study.

The bibliometric analysis process is conducted after the document inclusion stage. The bibliometric method is widely recommended in previous research on literature reviews as it allows for the representation of quantitative data derived from many journal articles across various database collections. The bibliometric analysis in this study utilizes open-source software, namely VOSviewer, applying the same keywords as in the systematic literature review—model, formulation strategy, and offset printing—with a total of 50 articles analyzed.
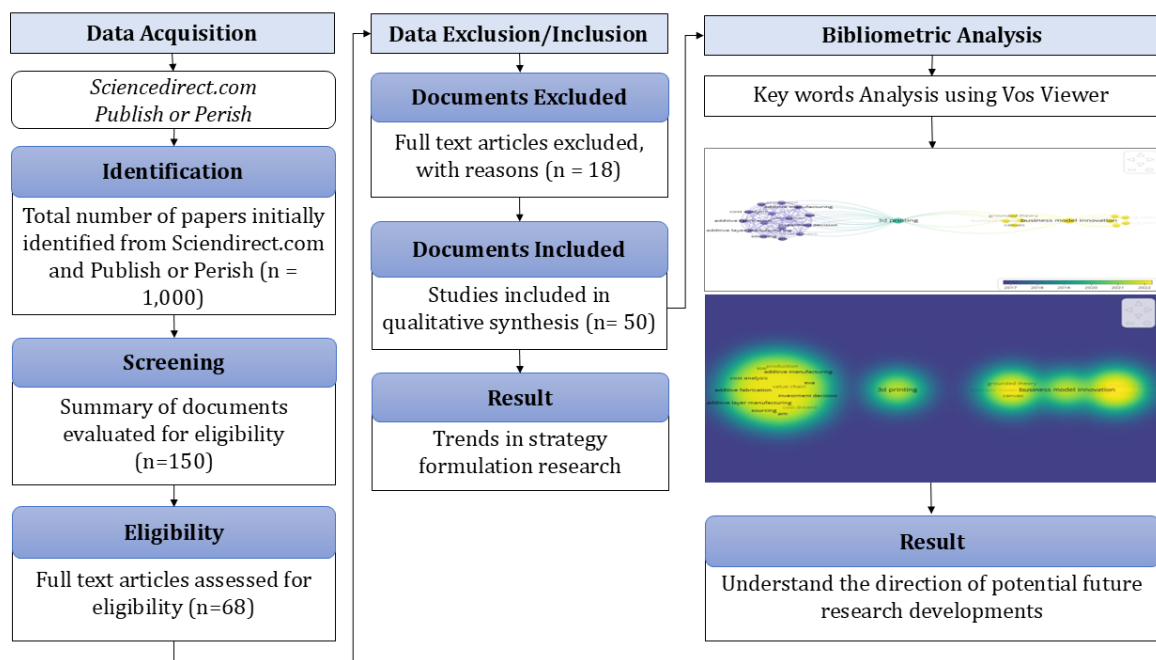
Figure 1. Stages of systematic review process and bibliometric analysis

Table 1.
Literature review results

Method/Model		Reference
Quantitative Method	PLS-SEM	[7], [10], [11], [12]
	Simulation	[13], [14]
	Meta-analytic techniques	[5], [15], [16], [17], [18], [19], [20], [21], [22], [23], [24], [25]
	Cognitive modeling	[3]
	Hoffer Matrix	[26]
	Design Science Research Method	[6], [26]
	Pearson Correlation	[27]
	ZAPROS III-i	[28]
	Lean Manufacturing, Single Minute Exchange of Die (SMED)	[29]
	Survey and observation	[30]
Quantitative Model	Model-based predictive control (MPC)	[31]
	Circular Business Models, and Circular Supply Chain Management	[32]
	The Lewin's change model	[33]
	Porter strategy model, and Business model canvas	[34]
Qualitative Method	In-depth interview	[1], [8], [35], [36], [37], [38], [39], [40], [41], [42], [43]
	Case study	[8], [44], [45], [46], [47], [48], [49], [50]
	Ecosystem construct	[2]
	Fuzzy-set qualitative comparative analysis (fsQCA)	[51]

The systematic review process, which consists of four stages. The first stage is to determine the data to be used. In this study, data or articles were taken from sciencedirect.com and publish or perish version 8. Then identify a total of 1,000 articles obtained from sciencedirect.com and publish or perish version 8.

The second stage is screening, namely evaluating the eligibility of all articles, and 150 articles are eligible. Then the third stage is to evaluate the eligibility of the entire article (full text) so that the eligible articles become 68 articles. Of these 68 articles were then evaluated again and found that there were 18 articles that did not meet the criteria, so the number became 50 articles. In the fourth stage, the 50 articles were then analyzed using Systematic Literature Review (SLR) from several factors, namely approach, model, and research method.

3. Results and discussions

Table 1 presents the Research Literature Study, which summarizes the results of a literature review of publications from 2014 to 2024, with articles sourced from ScienceDirect and Publish or Perish (version 8, Google Scholar). In Table 1, all articles are analyzed based on the research approach used, followed by identifying the research models/methods applied.

After reviewing 50 journal articles on business strategy formulation, researchers can observe the development of research in this field across various industries. This allows for an understanding of the research approaches and models/methods employed in each study. The findings from this review also help identify trends in commonly used research models/methods over the 2014–2024 period. Furthermore, these insights can serve as alternative models/methods for future industrial strategy formulation.

Based on Table 1, research approaches are categorized into two types: quantitative and qualitative. Regarding research that applies models, only four

articles out of 50 adopt this approach, while 46 articles employ various methods.

- In the quantitative approach, the most widely used method is Meta-analytic techniques, applied in 12 articles (24%) of the total reviewed.
- In the qualitative approach, the most frequently used methods are in-depth interviews (11 articles, 22%) and the comparative case study method (9 articles, 18%).

For better clarity, Table A1 (see Appendices) presents a recapitulation of the literature study, summarizing the publication year of research articles, authors, research approaches, and the research models/methods used in each article. This helps identify trends in research approaches and the most frequently used research models/methods for each year.

Based on Table A1, 50 articles were classified according to research approach and research model/method. The research approach is divided into two categories: quantitative and qualitative. In the quantitative approach, the most used method is meta-analytic techniques, which have been applied consistently from 2014 to 2024. This indicates that the research trend for quantitative approaches favors the use of meta-analytic techniques.

Based on Table A1, two research trends utilize qualitative research approaches: in-depth interviews, which were used from 2016 to 2022, and comparative case study methods, which were used from 2016 to 2023. Fig. 2 illustrates the distribution of article publication years for the period 2014–2024, with the highest number of articles published in 2022 (11 articles) and 2021 (7 articles). Fig. 3 illustrates the distribution of research models/methods used across all 50 articles. The most frequently used methods are meta-analytic techniques (12 articles), in-depth interviews (11 articles), and comparative case studies (9 articles). Fig. 4 presents the percentage of countries where the research was conducted.
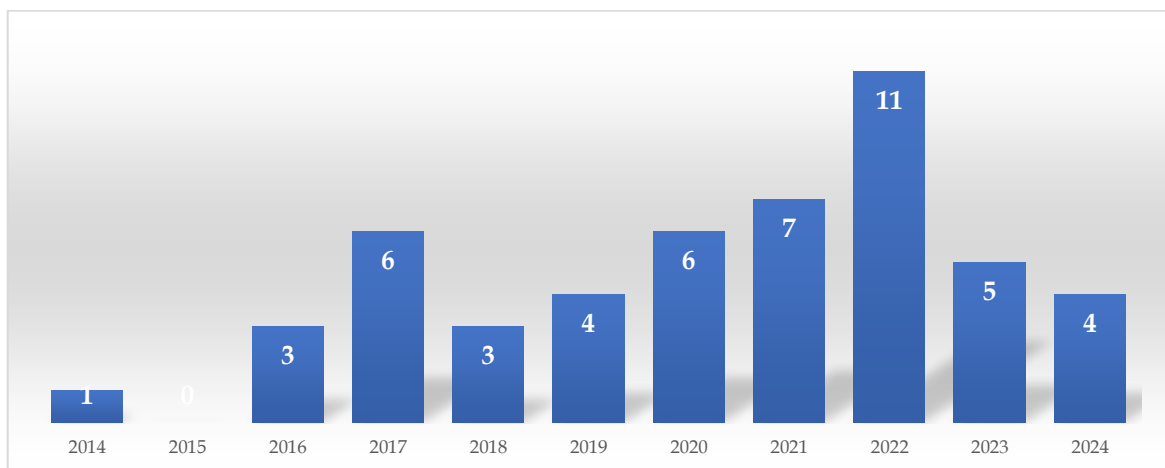
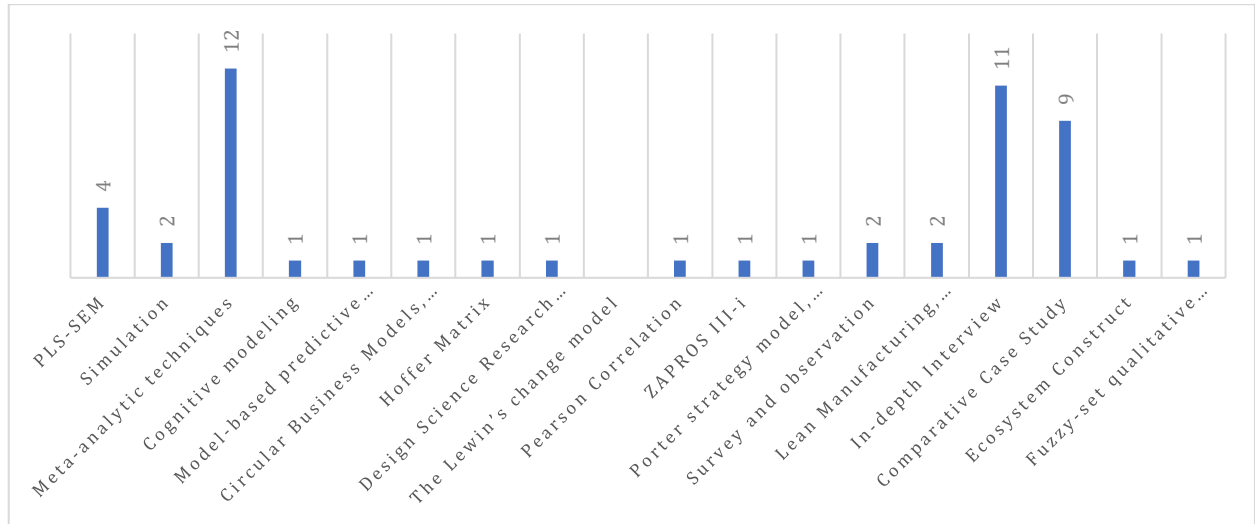**Figure 2.** The distribution of articles per year
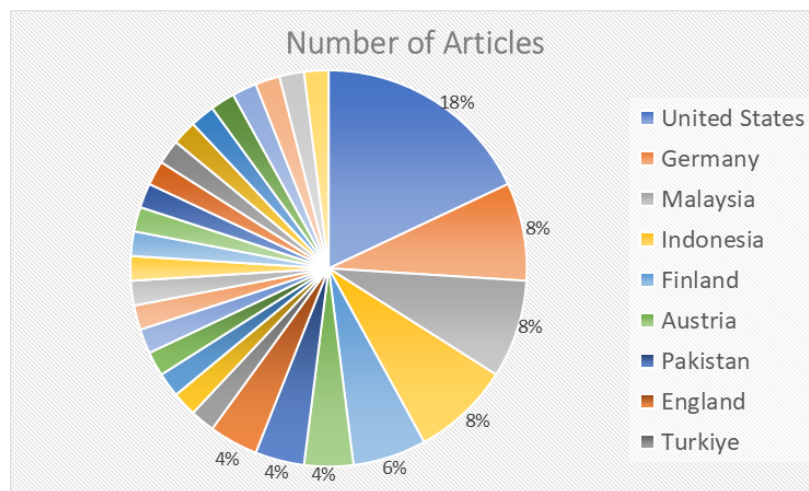
Figure 3. Research model and methods
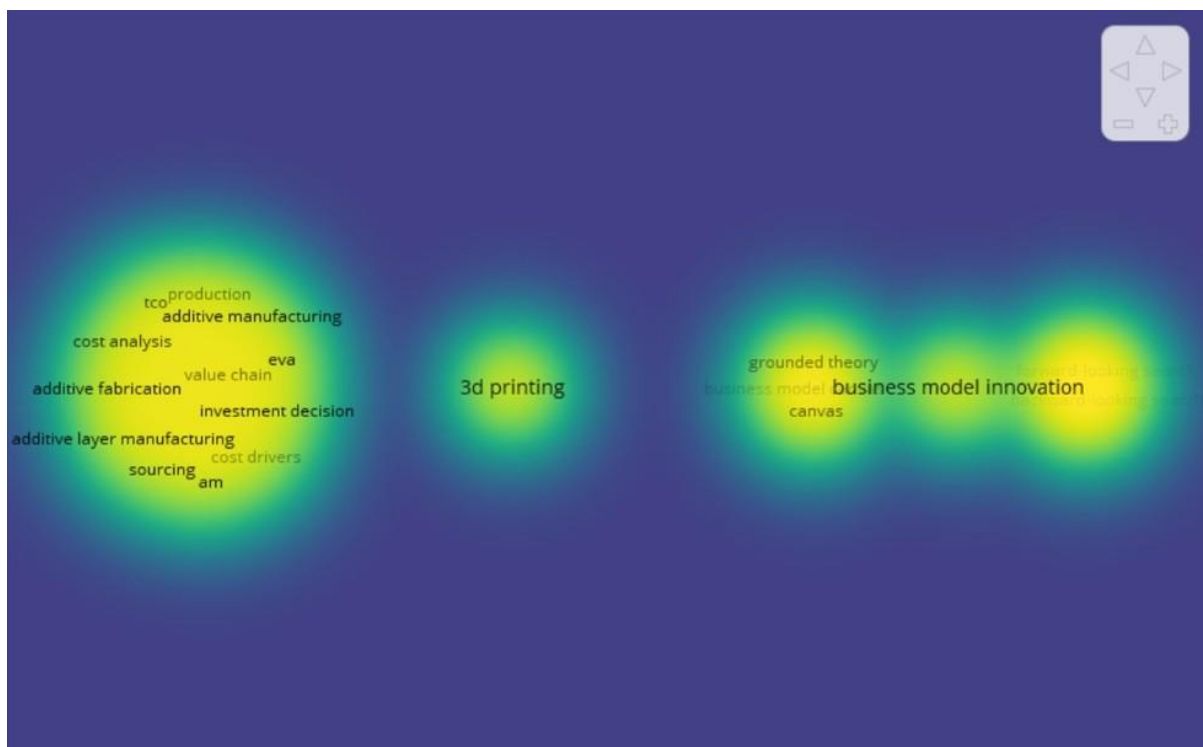

Figure 4. Number of publications by country

Figure 5. Bibliometric analysis results

Among the 50 articles, research sites are distributed across 28 countries. The United States is the most common research location, accounting for 18% (9 articles), followed by Germany, Malaysia, and Indonesia, each contributing 8% (4 articles). Finland follows with 6% (3 articles), while Austria, Pakistan, and the UK each account for 4% (2 articles). The remaining 21 countries contribute 2% each (1 article per country). This distribution indicates that strategy formulation has been a widely explored research topic across 28 countries from 2014 to 2024.

Fig. 5 presents the bibliometric analysis results using VOSviewer software. The analysis places '3D printing' at the center and in a darker area, indicating that this theme or research method is still relatively underexplored as a primary research topic. On the left, a lighter area suggests frequent use of themes or methods related to technical aspects such as 'additive fabrication,' 'value chain,' 'cost analysis,' and 'production,' highlighting that much of the research in this field focuses on production and cost analysis.

On the right, two groups emerge: a lighter area focusing on business model canvas and scientometrics, and a darker area emphasizing business model innovation. Overall, the bibliometric visualization suggests that future research opportunities lie in exploring 3D printing and business model innovation. The findings indicate that a viable strategy for the offset printing industry is to consider adopting new technologies like 3D printing to gain a competitive advantage in an increasingly dynamic market. Additionally, business model innovation highlights a growing shift in business strategy formulation, where companies are moving toward more flexible and adaptive models. This aligns with the broader trend of digitalization and deep business transformation, requiring companies to rethink how they develop and manage strategies to remain competitive amid rapid market changes.

4. Conclusions

Based on systematic literature review and bibliometric analysis, the research trend for quantitative approaches from 2014 to 2024 centers on meta-analytic techniques, while qualitative approaches from 2016 to 2022 emphasize in-depth interviews and, from 2016 to 2023, comparative case study methods. The research trend for business strategy formulation models could not be analyzed due to the limited number of articles addressing the models employed. Future research directions point toward 3D printing and business model innovation. The offset printing industry should consider adopting new technologies, such as 3D printing, to gain a competitive advantage in an increasingly dynamic market, alongside implementing more flexible and adaptive business model innovations. This study's limitation lies in its reliance on only two data sources—Publish or Perish version 8 and ScienceDirect, resulting in limited variation in findings, as other relevant articles may exist in additional databases. Therefore, future research should incorporate a broader range of data sources.

Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article and its supplementary materials.

AI Usage Statement

The authors did not use AI for this research.

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Appendices

Table A1.
Recapitulation of the literature review

No	Year	Author	Approach/Method/Model																			
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	2014	[36]	√				√															
2	2016	[21]	√																√			
3	2016	[27]		√																√		
4	2016	[34]	√											√								
5	2017	[19]	√				√															
6	2017	[33]	√				√															
7	2017	[2]		√																	√	
8	2017	[40]		√										√								
9	2017	[49]	√				√															
10	2017	[24]	√													√						
11	2018	[20]	√										√									
12	2018	[29]	√												√							
13	2018	[28]		√																√		
14	2019	[43]	√				√															
15	2019	[22]		√										√								
16	2019	[44]		√																		√
17	2019	[51]	√				√															
18	2020	[1]		√																√		
19	2020	[50]	√				√															
20	2020	[25]	√				√															
21	2020	[18]		√																√		
22	2020	[30]	√														√					
23	2020	[6]		√								√										
24	2021	[17]		√																√		
25	2021	[37]		√																√		
26	2021	[35]	√		√																	
27	2021	[8]		√										√								
28	2021	[41]		√																√		
29	2021	[39]	√														√					
30	2021	[7]	√		√																	
31	2022	[45]	√							√												
32	2022	[32]	√								√											
33	2022	[26]	√				√															
34	2022	[12]		√										√								
35	2022	[50]	√			√																
36	2022	[13]	√			√																
37	2022	[14]	√				√															
38	2022	[47]		√																√		
39	2022	[5]	√				√															
40	2022	[42]		√																√		
41	2022	[16]		√										√								
42	2023	[3]	√					√														
43	2023	[11]	√						√													
44	2023	[31]		√										√								

No	Year	Author	Approach/Method/Model																		
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
45	2023	[23]		√										√								
46	2023	[46]		√										√								
47	2024	[9]	√		√																	
48	2024	[48]	√			√																
49	2024	[52]	√				√															
50	2024	[10]	√		√																	

Remarks:
A. Quantitative
B. Qualitative
C. PLS-SEM
D. Simulation
E. Meta analytical techniques
F. Cognitive modeling
G. Model Based predictive control
H. Circular Business Models, and circular supply chain manaegent
I. Hoffer Matrix
J. Design Science Research Method
K. The Lewin's Change Model
L. Comparative case study
M. ZAPROS III-I
N. Porter Strategy Model, dan Business Model Canvas
O. Survey and observation
P. Lean Manufacturing, Single Minute of Die (SMED)
Q. Pearson Correlation
R. In-depth interview
S. Ecosystem construct
T. Fuzzy-set qualitative comparative analysis (fsQCA)