

# SYSTEMATIC LITERATURE REVIEW ON DETERMINANTS OF ORGANIZATIONAL INNOVATION ON SME PERFORMANCE: RESEARCH TRENDS, DATA SETS, AND METHODS

**MAYA SARI DEWI \***

Lambung Mangkurat University, Indonesia. \*Corresponding Author Email: mayadewi@ulm.c.id

**SALADIN GHALIB**

Lambung Mangkurat University, Indonesia.

**LAILA REFIANA SAID**

Lambung Mangkurat University, Indonesia.

**YUSUF HIDAYAT**

Lambung Mangkurat University, Indonesia.

## Abstract

This article aims to identify the determinants of organizational innovation on the performance of Small and Medium Enterprises (SMEs) by looking at research trends, data sets, and research methods. The industrial era 4.0 brings organizations, including SMEs, into a complex, dynamic, and interconnected environment full of unpredictability and rapid change. For this reason, SMEs need to consider internal and external factors in the study of organizational innovation. Knowledge sharing is one of the ways that companies can optimize information and knowledge obtained from partners and competitors in identifying market opportunities. This article uses a systematic literature review method to elaborate on the literature related to determining the impact of organizational innovation on SME performance. Twenty-six articles reviewed in this study were sourced from Google Scholar by adding the keyword Elsevier in the search mode. This literature review concludes that current research on the determinants of organizational innovation on SME performance focuses on two topics and trends: estimation and classification. In addition, 81% of the selected studies used private datasets, and 19% used public datasets. Twelve different methods have been applied to address the impact of organizational innovation on SME performance. Of these twelve methods, three were identified as the most widely used in the abovementioned topic. They are Qualitative approaches (QA), Linear Regression Analysis (LRA), and Structural Equation Modeling (SEM).

**Keywords:** Innovation, Organization Innovation, SME Performance, Systematic Literature Review.

## 1. INTRODUCTION

Small and Medium Enterprises (SMEs) play a significant role in a country's economy. Namely, SMEs can significantly contribute to economic growth and job creation and reduce social inequality. SMEs are one of the economic forces in Indonesia that has long been proven to be the main driver in economic growth and survived the economic crisis in 1988.

The United Nations Conference on Trade and Development (UNCTAD), in its report on the ASEAN Investment Report 2022, states that there are 65.46 million SMEs, which contribute 60.3% to GDP and can absorb labor in Indonesia (Azman et al., 2021; Hendrawan et al., 2018; Naode, 2008; Sudjinan & Juwari, 2018; Syahyudi, 2018).

However, SMEs often experience obstacles in their organizational development. Several conventional problems that have not been fully resolved (closed loop problems), including limited human resources, ownership, financing, marketing, and other managerial and business management issues, are among the causes of the difficulty of SMEs in competing with large companies (Abor & Quartey, 2010).

In addition, SMEs in the creative industry sector often tend to make decisions with a short-term orientation, reflected in the need for continuous innovation and consistency in key business activities. As a result, the long-term performance development of SMEs in the creative industry sector tends to be hampered and less directed (Lauria et al., 2014).

The industrial era 4.0 brings organizations, including SMEs, into a complex, dynamic, and interconnected environment that is full of uncertainty and rapid change. For this reason, SMEs need to consider internal and external factors in the study of organizational innovation. Knowledge sharing is one of the ways that companies can optimize information and knowledge obtained from partners and competitors by identifying market opportunities (Curado et al., 2018).

Several studies emphasize the importance of innovation in achieving SME performance. Organizational innovation becomes very important for SMEs to gain a competitive advantage, involving developing new products, applying information and communication technology, changing business processes, and developing new strategies. Through innovation, SMEs can improve their competitiveness, adapt to market changes, and create added value for customers (Abhari & McGuckin, 2023; Bouwman et al., 2019; Ebrahimi et al., 2018; Expósito & Sanchis-Llopis, 2019; Latifah et al., 2021; Rustiarini et al., 2022; Yunis et al., 2018).

## **2. METHOD**

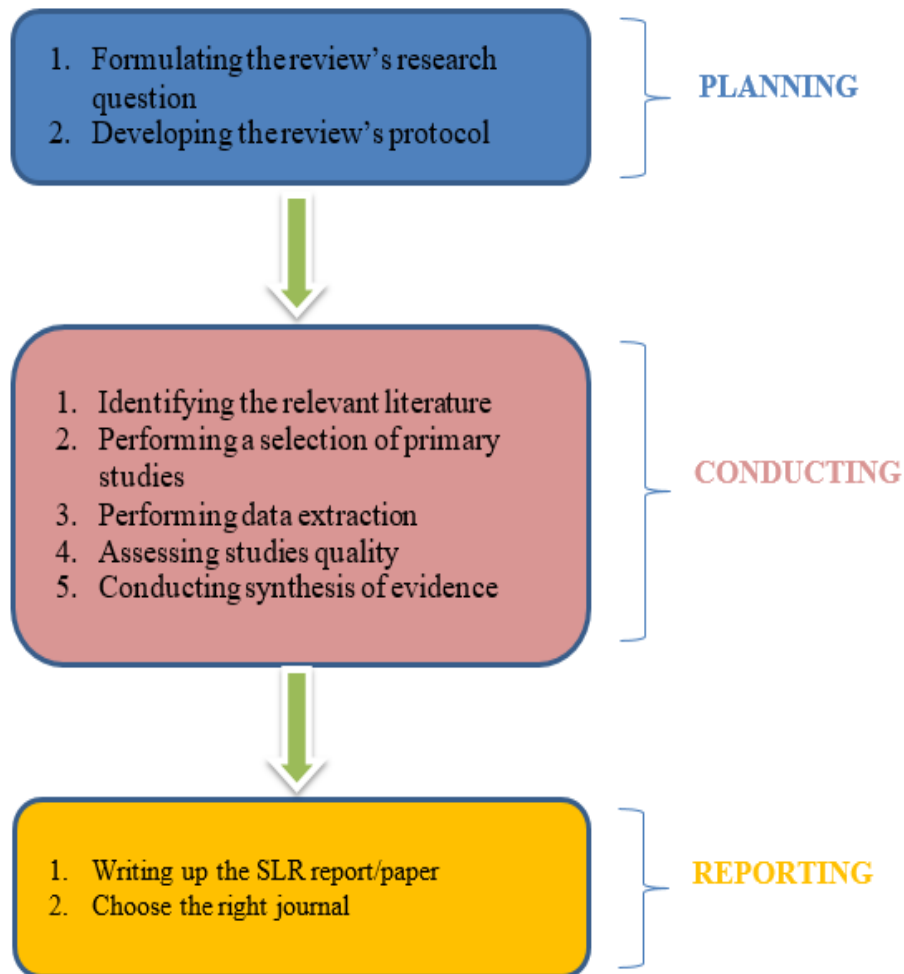
### **2.1. Review Method**

The process of gathering data through a systematic literature review (SLR) entails the examination of research publications published within the past five years and indexed in Google Scholar on a worldwide scale. The objective is to address research inquiries by consolidating diverse research findings.

The process of doing a Systematic Literature Review (SLR), as seen in Figure 1, consists of three distinct stages: the planning stage, the implementation stage, and the reporting stage (Kitchenham & Charters, 2007). In the initial phase, the necessity for a methodical examination was recognized (step 1). The introduction chapter of this study provided a discussion on the rationale for performing a Systematic Literature Review (SLR).

Subsequently, the systematic study conducted an assessment and evaluation of the significance of small and medium-sized enterprise (SME) performance in relation to organizational innovation. A review process was created in order to guide the implementation of the review and minimize the potential for researcher bias (step 2).

The initial phase encompassed the establishment of research inquiries, formulation of a search strategy, implementation of a research selection procedure incorporating inclusion and exclusion criteria, evaluation of study quality, and ultimately the extraction and synthesis of data. The review protocol is outlined in sections 2.2, 2.3, 2.4, and 2.5. The review procedure underwent iterative development, evaluation, and improvement during the various stages of performing and reporting the study.



**Picture 1: Systematic Literatur Review Steps (Kitchenham & Charters, 2007)**

## 2.2. Research Questions

Research questions (RQs) were defined to maintain the focus of the literature review. This section was designed with criteria for population, intervention, comparisons, outcomes, and context (PICOC) (Kitchenham & Charters, 2007). Table 1 shows the (PICOC) structure of the research questions.

**Table 1: PICOC Summary**

Population	Micro, Small, and Medium Enterprises (MSMEs), Small and Medium Enterprises (SMEs)
Intervention	Innovation, Organizational Innovation, MSME Performance, SME Performance
Comparisons	-
Outcomes	Factors that influence the achievement of SME performance, Organizational innovation has an impact on SME performance.
Context	Study on MSMEs / SMEs

The research questions and motivations addressed by this literature review are shown in Table 2.

**Table 2: Literature Review Research Questions**

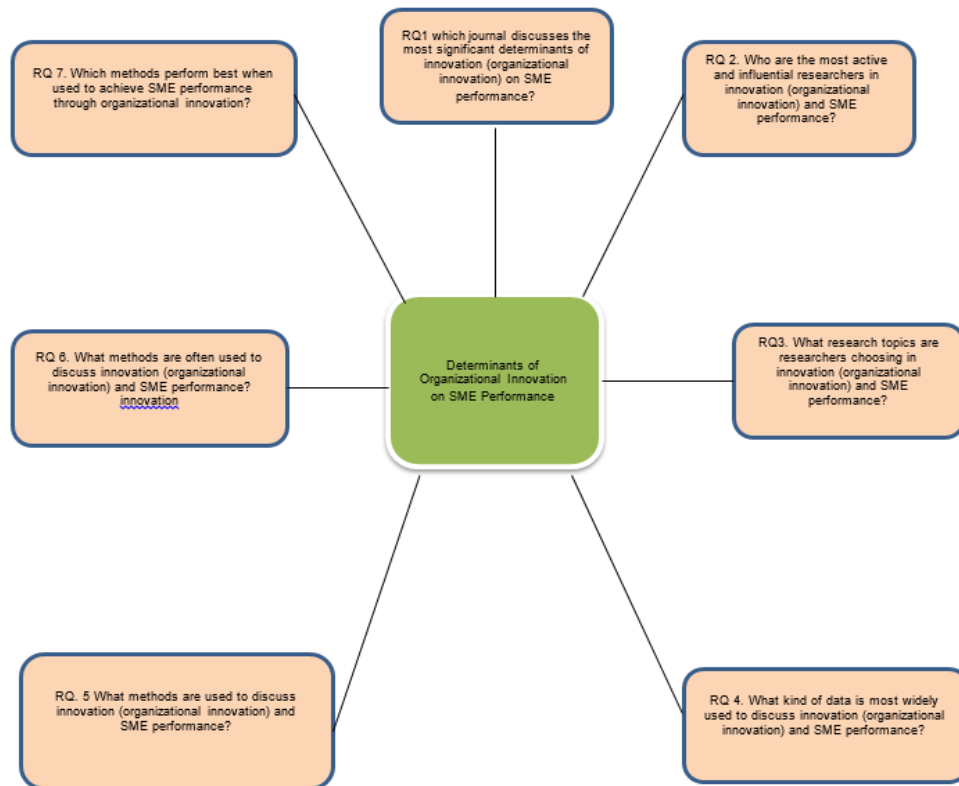
RQ	Research questions	Aims
RQ1	Which journal discusses the most significant determinants of innovation (organizational innovation) on SME performance?	To identify the most significant journals discussing the determinants of innovation (organizational innovation) on SME performance.
RQ2	Who are the most active and influential researchers in innovation (organizational innovation) and SME performance?	To identify the most active and influential researchers who contribute so much to research in innovation (organizational innovation) and SME performance.
RQ3	What research topics are researchers choosing in innovation (organizational innovation) and SME performance?	To identify research topics and trends in innovation (organizational innovation) and SME performance.
RQ4	What kind of data is most widely used to discuss innovation (organizational innovation) and SME performance?	To identify data sets commonly used in discussing innovation (organizational innovation) and SME performance.
RQ5	What methods are used to discuss innovation (organizational innovation) and SME performance?	To identify opportunities and trends for addressing innovation (organizational innovation) and SME performance.
RQ6	What methods are often used to discuss innovation (organizational innovation) and SME performance?	To identify the most frequently used methods in discussing innovation (organizational innovation) and SME performance.
RQ7	Which methods perform best when used to achieve SME performance through organizational innovation?	To identify the best method of achieving SME performance through organizational innovation.

The extraction of methods, frameworks, and data sets from primary research will enable the investigation and response to research questions 4 through 7, pertaining to the enhancement of small and medium-sized enterprise (SME) performance. Next, this study will undertake an analysis of the methodologies, frameworks, and datasets pertaining to small and medium-sized enterprise (SME) performance. The objective is to identify the methods, frameworks, and datasets that hold significance in assessing the impact of innovation, specifically organizational innovation, on SME performance.

Conversely, this analysis will also identify the methods, frameworks, and datasets that lack such significance. Research Questions 4 to 7 serve as the primary inquiries guiding this study, while Research Questions 1 to 3 are designed to assess the broader research framework. study Questions 1 to 3 offer a comprehensive examination of summaries and

synopses pertaining to distinct study domains that investigate the factors influencing innovation (specifically, organizational innovation) and its impact on the performance of small and medium-sized enterprises (SMEs).

The basic mind map of Systematic Literature Review (SLR) is presented in Figure 2, illustrating the approaches, concepts, and datasets employed in investigating the factors influencing organizational innovation and its impact on the performance of Small and Medium Enterprises (SMEs).



**Picture 2: Basic Mind Map of SLR Determinants of Organizational Innovation on SME Performance**

### 2.3. Search Strategy

The fourth stage of the search process encompasses various actions, including the selection of a digital library, the formulation of a search string, the execution of a search, the refinement of the search string, and the retrieval of an initial compilation of primary research materials that align with the search string inside the digital library. Prior to commencing the search, it is imperative to carefully choose a pertinent selection of databases. This deliberate selection enhances the likelihood of locating articles that are extremely relevant to the research topic. To get the most comprehensive research, scholars typically conduct searches on the prevailing literature databases within this particular topic. This encompasses a diverse array of literary works and adopts a comprehensive viewpoint.

The digital database employed for the search is Google Scholar, accessible at <https://scholar.google.com>. Moreover, the supplementary term "elseviers" is employed during the search process in order to guarantee that the retrieved research materials originate from internationally recognized and indexed journals. The search string was developed according to the following steps:

1. Identifying search terms from the PICOC, specifically from the population and interventions.
2. Identifying search terms from the research question
3. Identifying search terms in the title, abstract, and relevant keywords.
4. Identifying synonyms, alternative spellings, and antonyms of search terms.
5. Searching string construction using Boolean-identified search terms AND and OR.

The following search strings are finally used, which are:

*(Innovation\* OR Organization Innovation) AND (MSMEs Performance\* OR SMEs Performance) AND (Determinant of MSMEs performance \* OR Determinant of SMEs performance)*

Modifications were made to the search query, while retaining the original, in order to avoid further expanding the already enormous compilation of unrelated research. The search query was subsequently tailored to align with the specific requirements of each individual database. The search process involved querying databases using title, keywords, and abstract as search criteria. The search was constrained by a specific range of publication years, specifically from 2018 to 2023. The focus of the search was on journal articles written in English and indexed for easy retrieval.

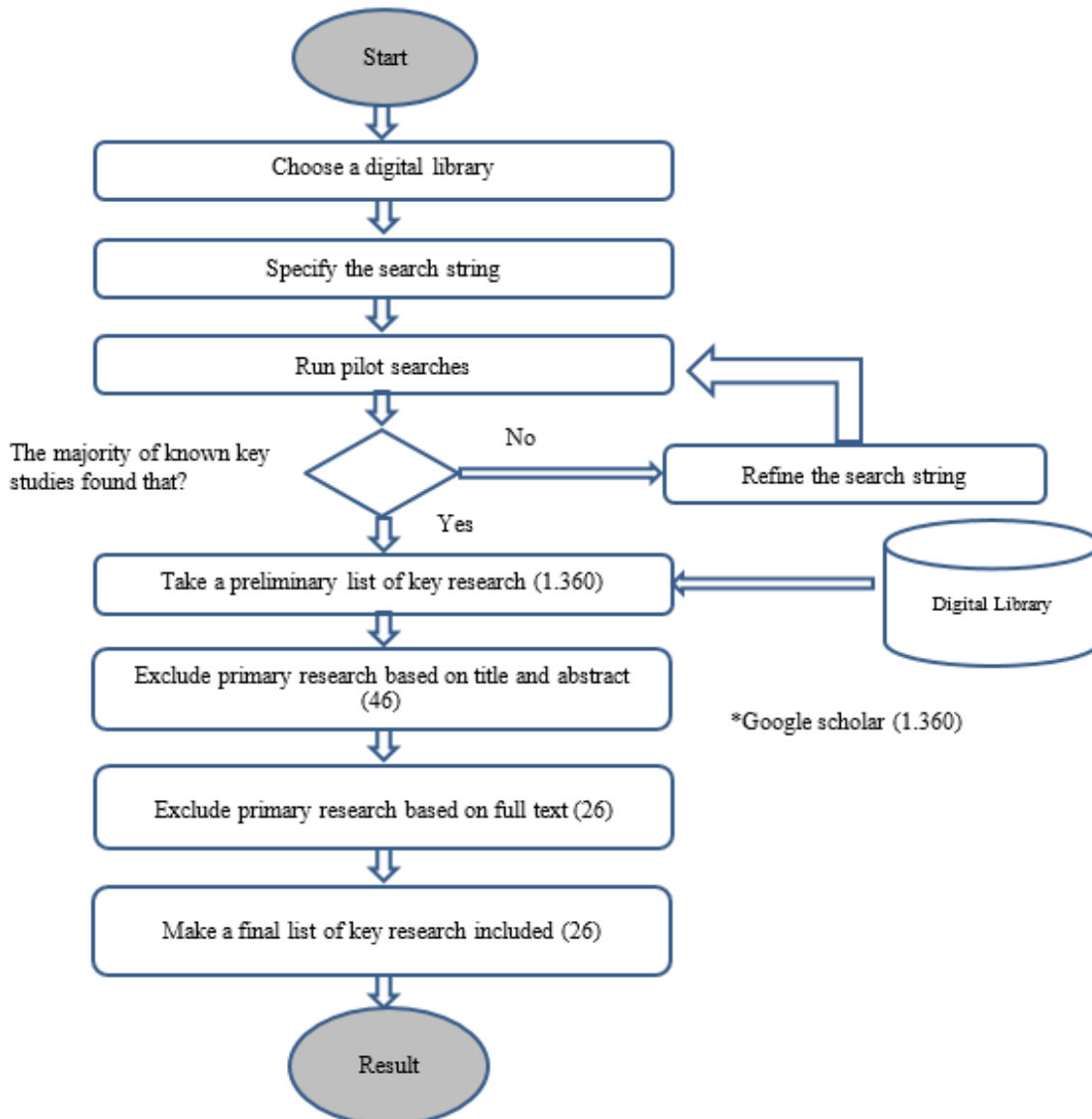
## 2.4. Research Selection

Inclusion and exclusion criteria were used to select the primary study. These criteria are shown in Table 3.

**Table 3: inclusion and exclusion criteria**

Criteria	Inclusion Criteria	Exclusion Criteria
Type	Indexed international journals	Non-indexed international journal Conference Proceedings
Title	Mention MSME/SME performance and or innovation or organizational innovation	Not mentioned
Language	English	Besides English
Year Limits	2018 - 2023	Under 2018
Country	All Country	-
Topic	Entrepreneurship, Business, Management	Other topics
Respondents	MSME/SME	Other than MSMEs/SMEs

The Mendeley software, accessible at <https://mendeley.com>, was employed for the purpose of storing and managing the obtained search results. Figure 3 displays the specifics of the search procedure and the quantity of studies identified at each phase. Figure 3 illustrates the implementation of the study selection process, which is the fifth step in the Systematic Literature Review (SLR). This process was conducted in two distinct stages: firstly, the exclusion of primary studies based on their title and abstract, and secondly, the removal of primary studies based on their complete text.



**Picture 3: Research Selection Process in SLR Determinants of Organizational Innovation on SME Performance**



In the initial round, a total of 26 primary studies were included in the final selection. Subsequently, the complete texts of the 26 primary papers were subjected to analysis. In conjunction with the establishment of inclusion and exclusion criteria, the assessment of primary study quality, alignment with the research question, and comparability among studies were taken into account. Additionally, the author's previous research conducted in several journals was also excluded. After applying the exclusion criteria based on full-text selection, a total of 26 primary papers were retained for further analysis. The comprehensive compilation of chosen research endeavors is provided in the final section of this scholarly publication, specifically in Table 6.

## 2.5. Research Data Extraction

The studies that were chosen were extracted in order to gather data that helped to address the research questions posed in this review. During the sixth step of the research process, a data extraction form was properly filled out for each of the 26 main studies that were selected for analysis. The data extraction form was specifically developed to gather the requisite data from the main studies in order to address the research inquiries. The identification of properties was accomplished through the formulation of the research statement and subsequent analysis to be undertaken. The data extraction process involved the utilization of six qualities, which were employed to address the study questions outlined in Table 4. These attributes served as the foundation for iteratively retrieving the necessary data.

**Table 4: Data Extraction Properties Mapped to Research Questions**

Property	Research Questions
Researchers and publications	RQ1, R12
Research trends and topics	RQ3
Dataset of Organizational Innovation and SME Performance	RQ4
Matrix of Organizational Innovation and SME Performance	RQ4
Methods of achieving SME performance through organizational innovation	RQ5, RQ6, RQ7,

## 2.6. Data Quality Assessment and Data Synthesis

The ninth step in the Systematic Literature Review (SLR) involves evaluating the research quality that informs the interpretation of synthesized findings and the determination of the robustness of the specified conclusions.

The primary objective of data synthesis is to systematically collect and analyze relevant information from a carefully chosen set of studies in order to address the research topic at hand. A little quantity of evidence may possess limited evidential strength, but when a substantial quantity of evidence is amassed, it has the potential to bolster the conclusions that might be drawn. This article examines a combination of quantitative and qualitative data. The approach employed to amalgamate the retrieved data varies depending on the type of research topic. The approach employed in this study was the narrative synthesis methodology. Various visualization tools, such as bar charts, pie charts, and tables, were employed to augment the presentation of the distribution of strategies for enhancing small and medium-sized enterprise (SME) performance through organizational innovation.



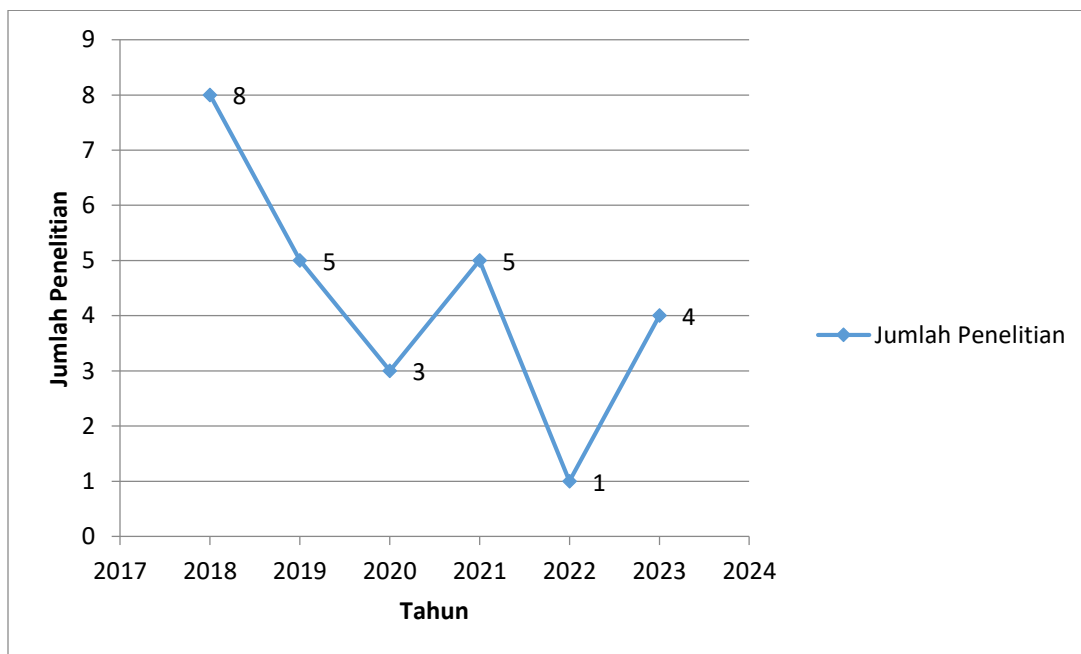
## 2.7. Threats to Validity

The objective of this validity review is to critically examine the existing literature pertaining to the enhancement of small and medium-sized enterprise (SME) performance through the implementation of organizational innovation. This review endeavors to mitigate bias in the process of selecting the papers to be included in the review. The methodology employed in the study search deviated from the manual examination of titles of all articles published in indexed journals. This implies that the review may have omitted certain items that were published in academic journals. Additionally, the review did not consider research findings from conference proceedings and non-indexed journals. Hence, certain systematic literature review (SLR) papers have incorporated various sources of information pertaining to experiences in small and medium-sized enterprises (SMEs). For instance, Jorgensen and Sheppers (2007) deliberately excluded conference proceedings from their SLR in order to mitigate the additional burden on the researcher.

## 3. RESEARCH RESULTS

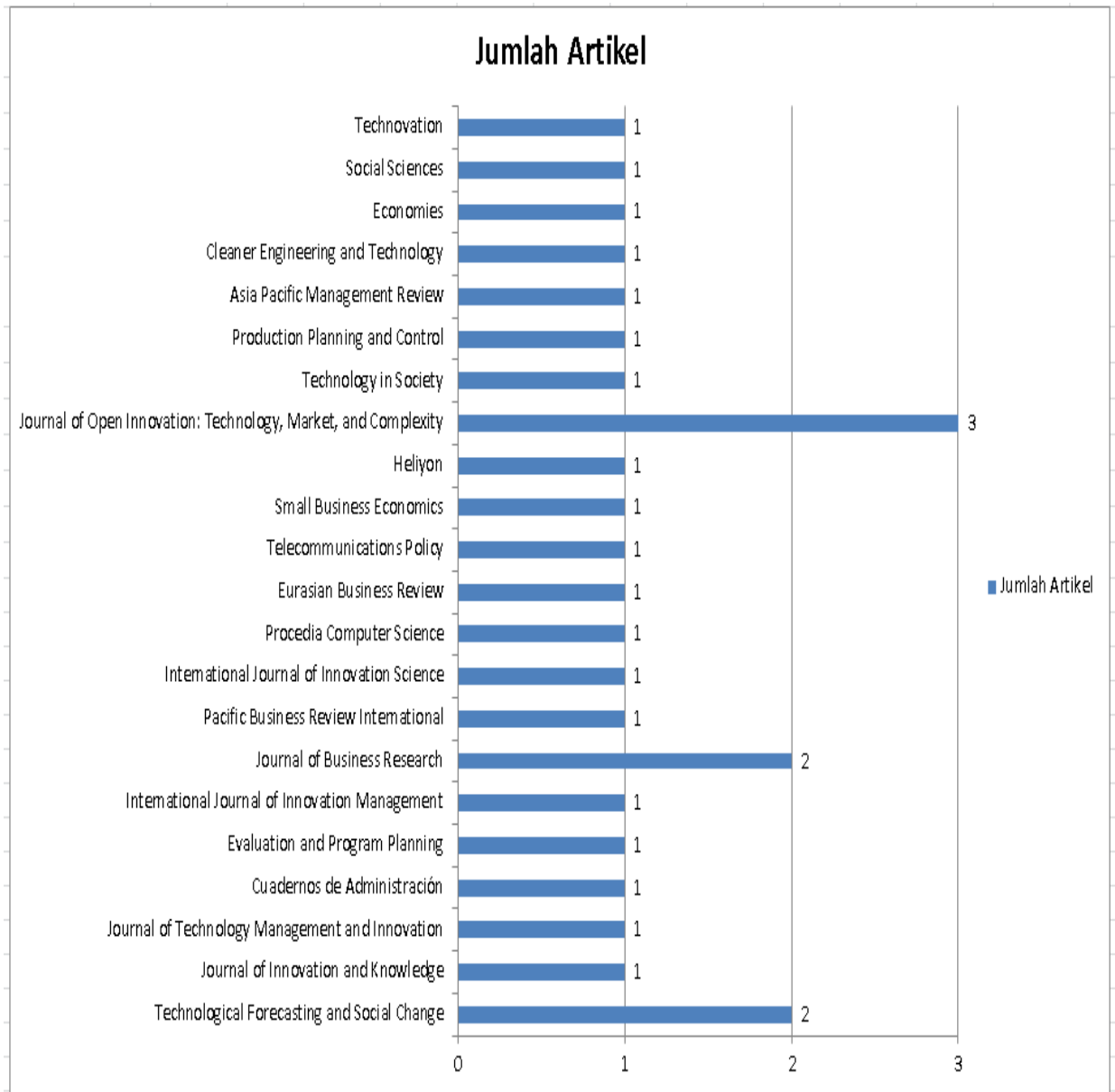
### 3.1. Important Journal Publications in Review

This literature review examines 26 primary studies that investigate the factors influencing organizational innovation and its impact on the performance of small and medium-sized enterprises (SMEs). The temporal distribution of scholarly research exhibits a notable inclination towards investigating the performance of small and medium-sized enterprises (SMEs), particularly in relation to the antecedent of organizational innovation.



Picture 4: Distribution of Selected Studies in SLR Determinants of Organizational Innovation on SME Performance

Moreover, Figure 5 displays the journals that have been published on the determinants of organizational innovation and their impact on the performance of small and medium-sized enterprises (SMEs), as indicated by the selected studies. This systematic literature review (SLR) excludes unindexed international journals and conference proceedings.



**Picture 5: Distribution of Journal Publications in SLR Determinants of Organizational Innovation on SME Performance**

Table 5 shows the Scimago Journal Rank (SJR) and Q category of the selected research journals published on the determinants of organizational innovation on SME performance.

**Table 5: Scimago Journal Rank of Selected Journals**

No	Nama Jurnal	SJR	Q Kategori
1	Technological Forecasting and Social Change	2.64	Q1
2	Journal of Innovation and Knowledge	2.65	Q1
3	Journal of Technology Management and Innovation	0.24	Q3
4	Cuadernos de Administración	0.14	Q1
5	Evaluation and Program Planning	0.53	Q2
6	International Journal of Innovation Management	0.49	Q2
7	Journal of Business Research	2.9	Q1
8	Pacific Business Review International	-	Indexed with Web of Science
9	International Journal of Innovation Science	0.71	Q1
10	Procedia Computer Science	0.51	Not yet assigned a quartile
11	Eurasian Business Review	0.88	Q1
12	Telecommunications Policy	1.19	Q1
13	Small Business Economics	2.73	Q1
14	Heliyon	0.61	Q1
15	Journal of Open Innovation: Technology, Market, and Complexity	0.74	Q1
16	Technology in Society	1.49	Q1
17	Production Planning and Control	1.72	Q1
18	Asia Pacific Management Review	0.88	Q1
19	Cleaner Engineering and Technology	0.78	Q1
20	Economies	0.52	Q2
21	Social Sciences	0.5	Q2
22	Technovation	2.41	Q1

### 3.2. Most Active and Influential Researchers

The literature review conducted for this study has identified a limited number of primary research articles. Consequently, the researchers who have made significant contributions or are actively engaged in investigating the determinants of organizational innovation on small and medium-sized enterprises (SME) performance remain unidentified.

Each researcher possesses a distinct research concentration, nevertheless, the outcomes of their respective investigations will collectively bolster the idea pertaining to the performance of small and medium-sized enterprises (SMEs).

### 3.3. Research Topic on Determinants of Organizational Innovation on SME Performance

The performance of small and medium-sized enterprises (SMEs) is a subject of extensive scholarly discourse in several academic journals. The preliminary investigation undertaken by the researcher using a pre-determined search query revealed that a total of 1,360 publications were published within the past five years.

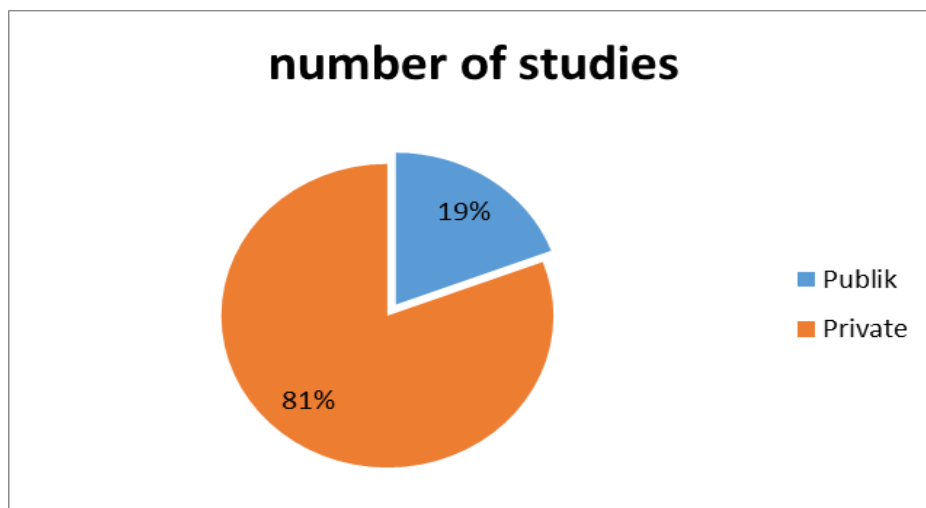
The examination of the chosen 26 primary works reveals that scholarly investigations pertaining to the factors influencing organizational innovation and its impact on the performance of small and medium-sized enterprises (SMEs) mostly concentrate on two key themes.

The objective of this study is (1) to estimate the impact of organizational innovation on the performance of small and medium-sized enterprises (SMEs), either directly or through the influence of mediating variables. (2) Categorizing the many forms of innovation inside small and medium-sized enterprises (SMEs) (Classification).

### 3.4. Data Set Used to Determine the Determination of Organizational Innovation on SME Performance

The primary research conducted in this study utilizes data sets that have been categorized into two distinct groups: public and private data. The term "public data" encompasses data that is derived from official institutions in both the public and private sectors. Additionally, it includes data extracted from literature reviews conducted by researchers, which serves as the foundation for their research findings and conclusions.

Moreover, the term "private data" pertains to data that is acquired directly from the specific sectors under investigation, and is distinct from publicly available data that can be accessed without restrictions. Figure 6 depicts that throughout this investigation, the dataset utilized by the chosen researchers exhibits a propensity towards being classified as private data.



**Picture 6: Distribution of Data Sets in SLR Determinants of Organizational Innovation on SME Performance**

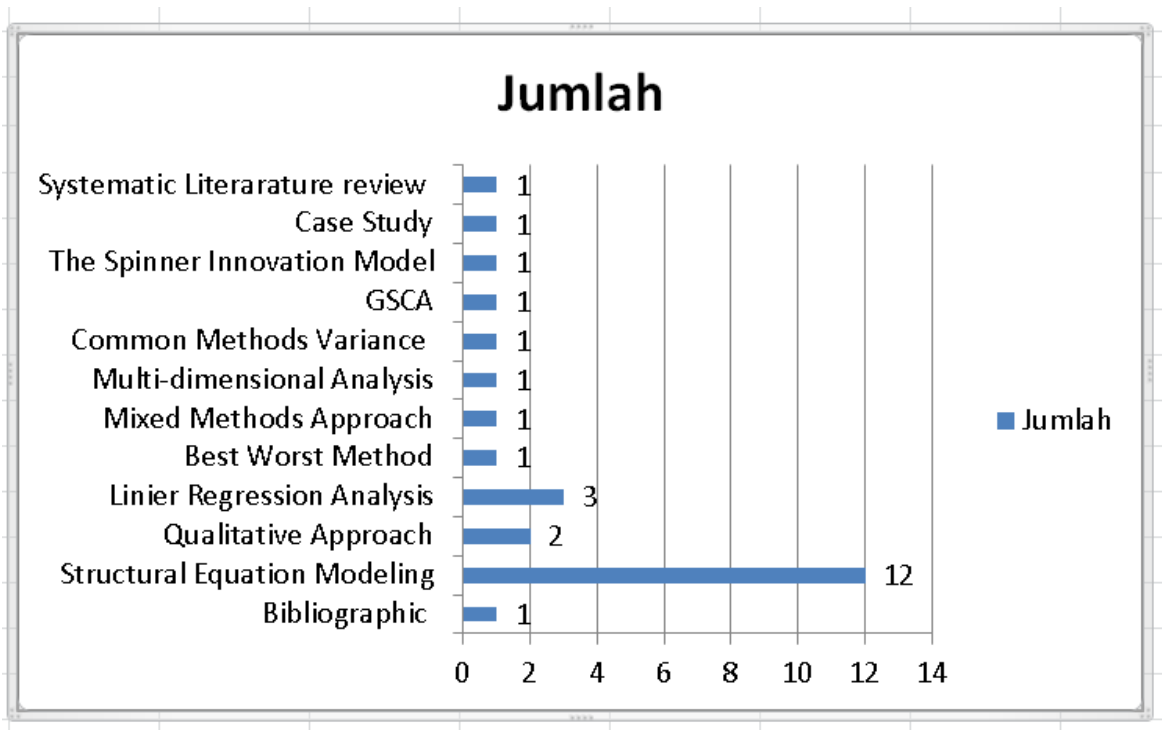
The analysis of data sets spanning many years reveals that there is a predominant utilization of non-public (private) data for research pertaining to the performance of small and medium-sized enterprises (SMEs). This aligns with the inherent attributes of small and medium-sized enterprises (SMEs) as profit-driven entities that typically possess constrained financial capital and resources necessary for their sustenance, thereby emphasizing the benefits they offer.

Consequently, each SME exhibits distinctiveness and individuality (Abdulrab et al., 2021; Guo et al., 2019; Subagyo et al., 2020; Wahyono & Hutahayan, 2021). In light of these circumstances, scholars with an inclination towards studying the performance of small

and medium-sized enterprises (SMEs) are compelled to actively seek out pertinent datasets that align with the specific objectives of their research.

### 3.5. The method used in research on the Determination of Organizational Innovation on SME Performance

As shown in Figure 7, from 2018 to 2023, 12 methods have been applied and are considered the best to discuss the determination of organizational innovation on SME performance.

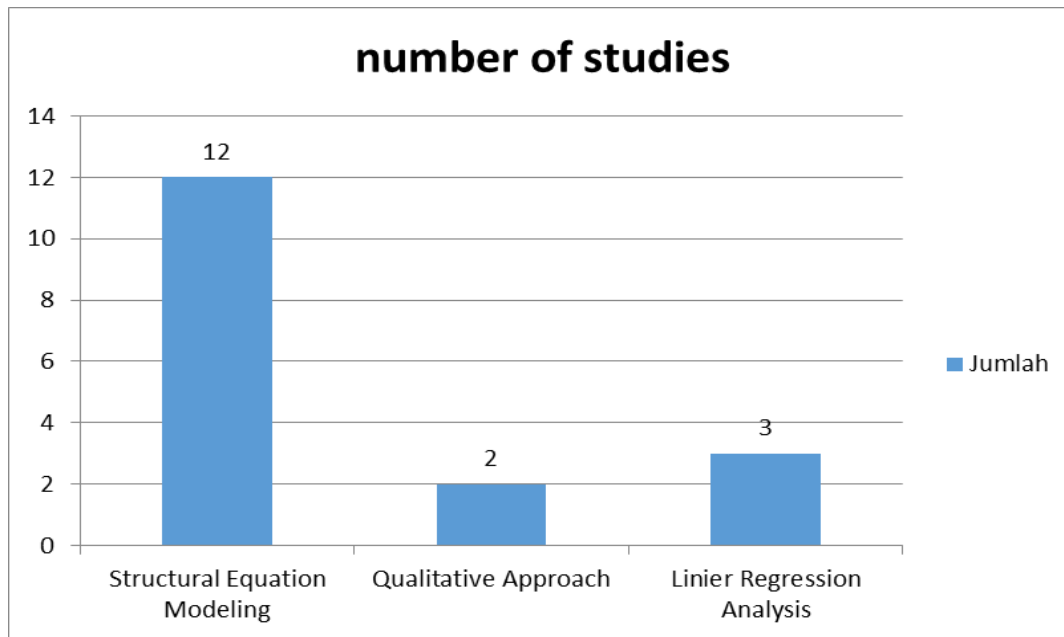


**Picture 7: Distribution of Methods Used in SLR Determinants of Organizational Innovation on SME Performance**

### 3.6. The most widely used method in research on Determinants of Organizational Innovation on SME Performance

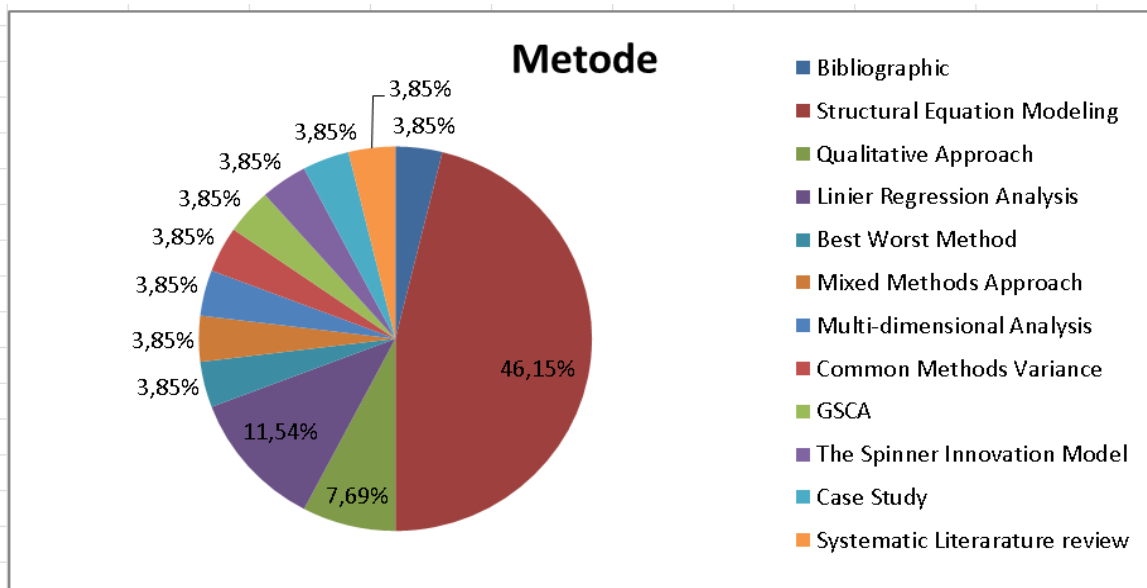
Among the twelve methodologies depicted in Figure 7 of section 3.5, three were recognized as the most commonly employed approaches for examining the factors influencing the performance of small and medium-sized enterprises (SMEs) in relation to organizational innovation.

The three methodologies under consideration are the Qualitative Approach (QA), Linear Regression Analysis (LRA), and Structural Equation Modeling (SEM). Figure 8 presents an overview of the predominant methodologies employed in the primary research selected for this study.



**Picture 8: The most widely used method in SLR Determinants of Organizational Innovation on SME Performance**

Qualitative Approach (QA), Linear Regression Analysis (LRA), and Structural Equation Modeling (SEM) were the three most frequently used methods. They were adopted by 65.38% of the selected primary researchers in this study. Figure 9 will show an illustration of this explanation.



**Picture 9: Percentage Distribution of Methods Used in SLR Determination of Organizational Innovation on SME Performance**

### **3.7. Best Method**

Based on the analysis of the chosen papers, it is evident that no single method can be deemed superior for investigating a particular research issue. However, it is evident that the approach has the potential to be translated into research goals. As the research aims become more intricate, it becomes imperative to adapt the methodology in order to ensure that the ensuing research is thorough and representative, hence facilitating the explication of the research findings.

In relation to the 26 primary papers chosen for this investigation, Figure 9 illustrates that 46.15% of the methodologies employed to address the research objectives consist of Structural Equation Modeling (SEM). This indicates that the majority of academics see Structural Equation Modeling (SEM) as the most effective approach for examining the factors influencing organizational innovation and its impact on the performance of Small and Medium Enterprises (SMEs).

One notable advantage of structural equation modeling (SEM) in comparison to alternative analytical techniques lies in its capability to effectively address complex scenarios involving several variables, encompassing both exogenous and endogenous factors. In the context of structural equation modeling (SEM), latent and manifest variables can be classified as either exogenous or endogenous variables. Structural equation modeling (SEM) has the capability to address issues pertaining to latent variables that are not directly observed, but can be assessed through the use of linear combinations of many observable variables (Gunzler et al., 2013; Shah & Goldstein, 2006).

## **4. CONCLUSION AND FUTURE RESEARCH DIRECTION**

The objective of this literature review is to identify and assess the prevailing patterns, datasets, and research methodologies employed in studying the factors that influence the performance of small and medium-sized enterprises (SMEs) in terms of organizational innovation during the timeframe of 2018 to 2023. A total of 26 papers published between the years 2018 and 2023 were collected based on the established inclusion and exclusion criteria. The present study employs a systematic literature review (SLR), which refers to a methodical approach involving the identification, evaluation, and interpretation of all existing research material in order to address specific research inquiries.

The examination of the primary papers chosen indicates that existing research on the factors influencing the success of small and medium-sized enterprises (SMEs) in terms of organizational innovation mostly concentrates on two key areas: estimation and classification. Furthermore, it is worth noting that a significant majority of the chosen research, specifically 81%, employed private databases, while the remaining 19% relied on public datasets.

A total of twelve distinct methodologies have been employed to investigate the impact of organizational innovation on the performance of small and medium-sized enterprises (SMEs). Among the twelve approaches discussed, it was determined that three of them



were the most commonly employed in the aforementioned subject matter. The three approaches discussed in this study are the Qualitative Approach (QA), Linear Regression Analysis (LRA), and Structural Equation Modeling (SEM).

In the forthcoming systematic literature review (SLR), researchers intend to undertake supplementary identification measures, including the identification of the conceptual framework employed to examine the relationship between organizational innovation and small and medium-sized enterprise (SME) performance. Furthermore, it is possible to incorporate a search timeframe, such as examining data from the preceding 10 or 20 years. Additionally, it is essential to conclude by broadening the scope of keyword exploration during article search endeavors.

**Table 6: List of Research in SLR Determinants of Organizational Innovation on SME Performance**

Year	Primary Studies	Publications	Datasets	Methods	Topic
2018	(van Oorschot et al., 2018)	Technological Forecasting and Social Change	Public	Bibliographic Coupling and Co-citation Analysis	The innovation adoption
	(Rajapathirana & Hui, 2018)	Journal of Innovation and Knowledge	Public	Structural Equation Modeling	Innovation capability, innovation type, and firm performance
	(Ben Arfi et al., 2018)	Technological Forecasting and Social Change	Private	Qualitative Approach	Knowledge, green innovation, and performance
	(Carvalho & Yordanova, 2018)	Journal of Technology Management and Innovation	Private	Linear Regression	Innovation from industrial SMEs
	(Agredo Diaz & Silva Castellanos, 2018)	Cuadernos de Administración	Private	Qualitative Approach	Open Innovation
	(Salimi & Rezaei, 2018)	Evaluation and Program Planning	Private	Best Worst Method	Firms' R&D performance
	(Anwar, 2018)	International Journal of Innovation Management	Private	Structural Equation Modeling	Business model innovation, SMEs performance, and Competitive advantage
	(Curado et al., 2018)	Journal of Business Research	Private	Mixed Methods Approach	Innovation and Performance in SMEs
2019	(Albassami, Ahmad, et al., 2019)	Pacific Business Review International	Private	Structural Equation Modeling	Knowledge Management, SMEs Performance and

					Organizational Innovation.
	(Maldonado-Guzmán et al., 2019)	International Journal of Innovation Science	Private	Structural Equation Modeling	Innovation capabilities and SMEs performance:
	(Ali et al., 2019)	Procedia Computer Science	Private	Structural Equation Modeling	Managerial capability, operational capability, and organizational innovation
	(Expósito & Sanchis-Llopis, 2019)	Eurasian Business Review	Private	Multi-dimensional Analysis	Type of Innovation and Performance in SMEs
	(Bouwman et al., 2019)	Telecommunications Policy	Private	Structural Equation Modeling	Performance digitalization of SMEs and business models Innovation
2020	(Gentile-Lüdecke et al., 2020)	Small Business Economics	Private	Linear Regression	Open innovation SMEs and Organizational structure
	(Ibidunni et al., 2020)	Heliyon	Private	Structural Equation Modeling	Knowledge transfer and innovation performance of SMEs
	(Tjahjadi et al., 2020)	Journal of Open Innovation: Technology, Market, and Complexity	Private	Structural Equation Modeling	Green Innovation, Green Market Orientation, Business Performance, and Open Innovation
2021	(Eva et al., 2021)	Journal of Business Research	Private	Common Methods Variance	organizational structure, servant leadership
	(Azeem et al., 2021)	Technology in Society	Public	Structural Equation Modeling	competitive advantage, organizational culture, knowledge sharing, and organizational innovation
	(Zaridis et al., 2021)	Production Planning and Control	Private	Linear Regression	SMEs strategy and scale constraints, supply chain collaboration, and firm performance

	(Wahyono & Hutahayan, 2021)	Asia Pacific Management Review	Private	GSCA	Market orientation, learning orientation, financial literacy, knowledge competence, innovation, and SMEs performance
	(Janahi et al., 2021)	Cleaner Engineering and Technology	Public	Systematic Literature review	Eco-innovation strategy
2022	(Rustiarini et al., 2022)	Economies	Private	Structural Equation Modeling	Green Innovation and SME Performance
2023	(Figueiredo et al., 2023)	Social Sciences	Private	The Spinner Innovation Model	Innovation and SME performance
	(Al-Momani et al., 2023)	Journal of Open Innovation: Technology, Market, and Complexity	Private	Structural Equation Modeling	Entrepreneurial orientation, innovation, and SMEs' performance
	(Larios-Francia & Ferasso, 2023)	Journal of Open Innovation: Technology, Market, and Complexity	Private	Structural Equation Modeling	Innovation and SME performance
	(Abhari & McGuckin, 2023)	Technovation	Public	Case Study	Open Innovation Organization

### Bibliography

- 1) Abdulrab, M., Al-Mamary, Y. H. S., Alwaheeb, M. A., Alshammari, N. G. M., Balhareth, H., & Al-Shammari, S. A. (2021). The mediating role of strategic orientations in the relationship between entrepreneurial orientation and performance of Saudi SMEs. *Brazilian Journal of Operations and Production Management*, 18(4), 1–15. <https://doi.org/10.14488/BJOPM.2021.029>
- 2) Abhari, K., & McGuckin, S. (2023). Limiting factors of open innovation organizations: A case of social product development and research agenda. *Technovation*, 119(May 2022), 102526. <https://doi.org/10.1016/j.technovation.2022.102526>
- 3) Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(February), 218–228.
- 4) Agredo Diaz, M. L., & Silva Castellanos, T. F. (2018). Innovation in companies operating in the foodstuffs sector of Colombia: An analysis from the perspective of open innovation. *Cuadernos de Administración*, 34(61). <https://doi.org/10.25100/cdea.v34i61.5922>
- 5) Al-Momani, L., Haddad, S., Sharabati, A. A. A., & Hashesh, M. A. (2023). The moderation role of entrepreneurial orientation on the influence of innovation on pharmaceutical SMEs' performance. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2). <https://doi.org/10.1016/j.joitmc.2023.100074>

- 6) Albassami, Ahmad, M., Hameed, Waseem, U., Naveed, R. T., & Moshfegyan, M. (2019). Does knowledge management expedite SMEs performance through organizational innovation? An empirical evidence from Small and Medium-sized Enterprises (SMEs). *Pacific Business Review International*, 12(1), 11–22. [www.pbr.co.in](http://www.pbr.co.in)
- 7) Ali, Z., Zwetsloot, I. M., & Nada, N. (2019). An empirical study to explore the interplay of managerial and operational capabilities to infuse organizational innovation in SMEs. *Procedia Computer Science*, 158, 260–269. <https://doi.org/10.1016/j.procs.2019.09.050>
- 8) Anwar, M. (2018). Business model innovation and SMEs performance-does competitive advantage mediate? *International Journal of Innovation Management*, 22(7), 1–31. <https://doi.org/10.1142/S1363919618500573>
- 9) Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing, and organizational innovation. *Technology in Society*, 66(January), 101635. <https://doi.org/10.1016/j.techsoc.2021.101635>
- 10) Azman, M., Andrianus, H. F., & Rustandi, D. (2021). *Economics and Development Analysis*. 47–60.
- 11) Ben Arfi, W., Hikkerova, L., & Sahut, J. M. (2018). External knowledge sources, green innovation and performance. *Technological Forecasting and Social Change*, 129(January), 210–220. <https://doi.org/10.1016/j.techfore.2017.09.017>
- 12) Bouwman, H., Nikou, S., & de Reuver, M. (2019). Digitalization, business models, and SMEs: How do business model innovation practices improve the performance of digitalizing SMEs? *Telecommunications Policy*, 43(9), 101828. <https://doi.org/10.1016/j.telpol.2019.101828>
- 13) Carvalho, N., & Yordanova, Z. (2018). Why say no to innovation? Evidence from industrial SMEs in European Union. *Journal of Technology Management and Innovation*, 13(2), 43–56. <https://doi.org/10.4067/S0718-27242018000200043>
- 14) Curado, C., Muñoz-Pascual, L., & Galende, J. (2018). Antecedents to innovation performance in SMEs: A mixed methods approach. *Journal of Business Research*, 89(December 2017), 206–215. <https://doi.org/10.1016/j.jbusres.2017.12.056>
- 15) Ebrahimi, P., Shafiee, B., Gholampour, A., & Yousefi, L. (2018). Impact of organizational innovation, learning orientation and entrepreneurship on SME performance: The moderating role of market turbulence and ICT. In *Springer International Publishing*. [https://doi.org/10.1007/978-3-319-71722-7\\_23](https://doi.org/10.1007/978-3-319-71722-7_23)
- 16) Eva, N., Sendjaya, S., Prajogo, D., & Madison, K. (2021). Does organizational structure render leadership unnecessary? Configurations of formalization and centralization as a substitute and neutralizer of servant leadership. *Journal of Business Research*, 129(March), 43–56. <https://doi.org/10.1016/j.jbusres.2021.02.023>
- 17) Expósito, A., & Sanchis-Llopis, J. A. (2019). The relationship between types of innovation and SMEs' performance: A multi-dimensional empirical assessment. *Eurasian Business Review*, 9(2), 115–135. <https://doi.org/10.1007/s40821-018-00116-3>
- 18) Figueiredo, R., Magalhães, C., & Huber, C. (2023). How to predict the innovation to SMEs? Applying the data mining process to the spinner innovation model. *Social Sciences*, 12(2). <https://doi.org/10.3390/socsci12020075>
- 19) Gentile-Lüdecke, S., Torres de Oliveira, R., & Paul, J. (2020). Does organizational structure facilitate inbound and outbound open innovation in SMEs? *Small Business Economics*, 55(4), 1091–1112. <https://doi.org/10.1007/s11187-019-00175-4>
- 20) Gunzler, D., Chen, T., Wu, P., & Zhang, H. (2013). Introduction to mediation analysis with structural equation modeling. *Shanghai Archives of Psychiatry*, 25(6), 390–394. <https://doi.org/10.3969/j.issn.1002-0829.2013.06.009>

- 21) Guo, Y., Wang, L., Wang, M., & Zhang, X. (2019). The mediating role of environmental innovation on knowledge acquisition and corporate performance relationship—a study of SMEs in China. *Sustainability (Switzerland)*, 11(8). <https://doi.org/10.3390/su11082315>
- 22) Hendrawan, A., Yulianeu, A., Sucahyawati, H., & Indriyani, I. (2018). Pengembangan Kompetensi UMKM Dengan Pembelajaran Organisasi. *INOBISS: Jurnal Inovasi Bisnis Dan Manajemen Indonesia*, 1(4), 489–496. <https://doi.org/10.31842/jurnal-inobis.v1i4.53>
- 23) Ibdunni, A. S., Kolawole, A. I., Olokundun, M. A., & Ogbari, M. E. (2020). Knowledge transfer and innovation performance of small and medium enterprises (SMEs): An informal economy analysis. *Heliyon*, 6(8), e04740. <https://doi.org/10.1016/j.heliyon.2020.e04740>
- 24) Janahi, N. A., Durugbo, C. M., & Al-Jayyousi, O. R. (2021). Eco-innovation strategy in manufacturing: A systematic review. *Cleaner Engineering and Technology*, 5, 100343. <https://doi.org/10.1016/j.clet.2021.100343>
- 25) Kitchenham, B. A., & Charters, S. (2007). Guidelines for performing Systematic Literature Reviews in Software Engineering (Software Engineering Group, Department of Computer Science, Keele .... *Technical Report EBSE 2007- 001. Keele University and Durham University Joint Report, January.*
- 26) Larios-Francia, R. P., & Ferasso, M. (2023). The relationship between innovation and performance in MSMEs: The case of the wearing apparel sector in emerging countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 9(1), 100018. <https://doi.org/10.1016/j.joitmc.2023.100018>
- 27) Latifah, L., Setiawan, D., Aryani, Y. A., & Rahmawati, R. (2021). Business strategy – MSMEs' performance relationship: Innovation and accounting information system as mediators. *Journal of Small Business and Enterprise Development*, 28(1), 1–21. <https://doi.org/10.1108/JSBED-04-2019-0116>
- 28) Lauria, A., Rodrigues, D. C., Sato, F. R. L., & Moreira, R. W. F. (2014). Biomechanical strength analysis of mini anchors for the temporomandibular joint. *Oral and Maxillofacial Surgery*, 18(4), 425–430. <https://doi.org/10.1007/s10006-013-0431-4>
- 29) Maldonado-Guzmán, G., Garza-Reyes, J. A., Pinzón-Castro, S. Y., & Kumar, V. (2019). Innovation capabilities and performance: Are they truly linked in SMEs? *International Journal of Innovation Science*, 11(1), 48–62. <https://doi.org/10.1108/IJIS-12-2017-0139>
- 30) Naode, I. Y. (2008). Perkembangan dan strategi memberdayakan Usaha Mikro Kecil dan Menengah (UMKM). *Jurnal FORMAS: Media Informasi & Komunikasi Ilmiah Mahasiswa-Masyarakat*, 1(4), 1–12.
- 31) Rajapathirana, R. P. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation and Knowledge*, 3(1), 44–55. <https://doi.org/10.1016/j.jik.2017.06.002>
- 32) Rustiarini, N. W., Bhegawati, D. A. S., & Mendra, N. P. Y. (2022). Does green innovation improve SME performance? *Economies*, 10(12). <https://doi.org/10.3390/economies10120316>
- 33) Salimi, N., & Rezaei, J. (2018). Evaluating firms' R&D performance using the best worst method. *Evaluation and Program Planning*, 66(October 2017), 147–155. <https://doi.org/10.1016/j.evalprogplan.2017.10.002>
- 34) Shah, R., & Goldstein, S. M. (2006). Use of structural equation modeling in operations management research: Looking back and forward. *Journal of Operations Management*, 24(2), 148–169. <https://doi.org/https://doi.org/10.1016/j.jom.2005.05.001>
- 35) Subagyo, Kumar, V., & Ernestivita, G. (2020). Entrepreneurial parameters and performance of MSMEs in East Java Province of Indonesia. *International Journal of Business Innovation and Research*, 23(2), 250–266. <https://doi.org/10.1504/IJBIR.2020.110102>

- 36) Sudjinan, S., & Juwari, J. (2018). Pemberdayaan potensi masyarakat melalui pendampingan UMKM dan koperasi di Kelurahan Telaga Sari Kota Balikpapan. *Jurnal Abdi Masyarakat Ilmu Ekonomi [J.A.M.I.E.]*, 1(1), 40–49. <http://jurnal.fem.uniba-bpn.ac.id/index.php/JAMIE>
- 37) Syahyudi, E. (2018). Manajemen Pemerintah Kota Pekanbaru dalam Pemberdayaan Usaha Kecil Mikro dan Menengah (UMKM) Di Kota Pekanbaru 2015. *JOM Fisip*, 5(1), 1–21. [http://www.statsghana.gov.gh/docfiles/glss6/GLSS6\\_Main\\_Report.pdf%0Ahttps://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2015/07/ENVS203-7.3.1-ShawnMackenzie-ABriefHistoryOfAgricultureandFoodProduction-CCBYNCSA.pdf](http://www.statsghana.gov.gh/docfiles/glss6/GLSS6_Main_Report.pdf%0Ahttps://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2015/07/ENVS203-7.3.1-ShawnMackenzie-ABriefHistoryOfAgricultureandFoodProduction-CCBYNCSA.pdf)
- 38) Tjahjadi, B., Soewarno, N., Hariyati, H., Nafidah, L. N., Kustiningsih, N., & Nadyaningrum, V. (2020). The role of green innovation between green market orientation and business performance: its implication for open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 1–18. <https://doi.org/10.3390/joitmc6040173>
- 39) van Oorschot, J. A. W. H., Hofman, E., & Halman, J. I. M. (2018). A bibliometric review of the innovation adoption literature. *Technological Forecasting and Social Change*, 134(March 2017), 1–21. <https://doi.org/10.1016/j.techfore.2018.04.032>
- 40) Wahyono, & Hutahayan, B. (2021). The relationships between market orientation, learning orientation, and financial literacy on the knowledge competence, innovation, and performance of small and medium textile industries in Java and Bali. *Asia Pacific Management Review*, 26(1), 39–46. <https://doi.org/10.1016/j.apmr.2020.07.001>
- 41) Yunis, M., Tarhini, A., & Kassar, A. (2018). The role of ICT and innovation in enhancing organizational performance: The catalysing effect of corporate entrepreneurship. *Journal of Business Research*, 88(June), 344–356. <https://doi.org/10.1016/j.jbusres.2017.12.030>
- 42) Zaridis, A., Vlachos, I., & Bourlakis, M. (2021). SMEs strategy and scale constraints impact on agri-food supply chain collaboration and firm performance. *Production Planning and Control*, 32(14), 1165–1178. <https://doi.org/10.1080/09537287.2020.1796136>