

# SYSTEMATIC LITERATURE REVIEW: THE COMPLEX ROLE OF INNOVATION ON THE SME PERFORMANCE

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ABSTRACT: Systematic literature review focusing on innovation variables as moderating and mediating exogenous variables on MSMEs performance is relatively rare. This study aimed to determine factors affecting performance mediated or moderated MSMEs bv innovation variables. The article search used the Google Scholar database. Of 500 articles, 320 were excluded based on title and abstract and 180 were screened for eligibility, resulting in 35 articles for review. The study found that innovation mediated 30 exogenous variables on MSMEs performance. There were 15 innovation variables; Innovation and Innovation Capability were the most used by researchers. Additionally, innovation variables such as Product Innovation, Innovation Culture, Innovation, Process Innovation, and Innovation Capability moderated about six exogenous variables on MSMEs performance. Innovation research with moderating models was still relatively small compared to mediation models.

**Keywords**: Systematic Literature Review (SLR); Innovation; Performance; SMEs; Quantitative

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#### INTRODUCTION

Innovation is essential in a rapidly changing business environment. Organizations that are effective in managing innovation are more likely to adapt to market dynamics, seize new opportunities, and stay ahead of the competition. Therefore, innovation management allows organizations to respond to emerging trends, customer demands, and technological advancements, ensuring their sustainability and long-term growth (Melendez & Dávila, 2022). Innovation is the ability of an organization to identify new ideas and turn new ideas into a product/service, or a new process that is better and beneficial to the organization (Aas & Breunig, n.d.). According to (Camilleri, 2018)the innovation process focuses on improving the efficiency and effectiveness of internal operations in micro, small and medium enterprises. SMEs that implement new technologies, automation, and digitalization, can streamline production processes, increase productivity, and reduce costs.

Several studies have proven that innovation has a positive effect on the performance of micro, small and medium enterprises. (Aljuboori et al., 2022) proving that innovation has a positive effect on the performance of SMEs. (Vijayakumar & Chandrasekar, 2022), explained that innovation capabilities have a positive effect on the performance of MSMEs.

This research aims to overcome the gap in the literature related to the role of innovation as a mediation and moderation variable in the performance of Micro, Small, and Medium Enterprises (MSMEs). Most previous studies have highlighted that innovation can directly improve MSME performance, but rarely discusses how innovation acts as a mediating variable that bridges or as a moderation variable that amplifies the influence of external factors such as market orientation, technological capabilities, and entrepreneurial strategies (Akinwale et al., 2022; Mule et al., 2021). This gap highlights the need for a more comprehensive approach to understanding the role of innovation in improving the competitiveness and adaptability of MSMEs amid the challenges of a dynamic business environment. This article investigates the role of innovation as a mediation and moderation variable in influencing the relationship between external factors and the performance of Micro, Small, and Medium Enterprises (MSMEs).

Through the *Systematic Literature Review* (SLR) method, this study compiles and reviews the latest literature to assess the role of innovation in a broader context. This study not only evaluates the effectiveness of innovation as a link in the relationship between external factors and MSME performance, but also highlights the relevance of innovation in moderating the impact of external changes, so that MSMEs can be more adaptive and responsive (Olawale et al., 2023). The results of this study are expected to provide a new understanding of the strategic role of innovation, as well as provide empirical evidence that supports the development of innovative business models that are in accordance with the needs of MSMEs in facing complex market dynamics.

## LITERATURE REVIEW

#### Innovation and Schumpeterian

Schumpeter's theory, as outlined in his classic influential 1939 book *Business Cycles*, describes the process of economic development and the key factors driving it. He posited that the foundation of economic development lies in the belief that capitalism is the most effective economic system for fostering rapid economic growth. According to Schumpeter (1934), the primary driver of economic development is innovation, and its agents are innovators or entrepreneurs. Entrepreneurs not only enhance profits and elevate societal living standards but also succeed in gaining monopolistic positions through competition. The Theory of Creative Destruction explains that economic renewal occurs through innovation, a mechanism that disrupts existing equilibrium and subsequently creates new conditions. Thus, innovation emerges as a fundamental factor in economic transformation. He further asserted that entrepreneurs, motivated by a desire to create, are individuals both willing and capable of transforming new ideas and discoveries into successful innovations. Through technological innovation, entrepreneurs introduce new outputs via novel processes, establishing conditions that allow them to outcompete rivals and imitators. This dynamic characterizes a competitive landscape driven by innovation (Taalbi, 2017).

Innovation extends beyond the development of new products or services (Chuang et al., 2016). It encompasses new business ideas and processes. Innovation is viewed as a mechanism enabling organizations to adapt to dynamic environments (Christensen et al., 2017). Entities must redesign their structures and workflows, enhance core competencies, develop new frameworks to respond to shifting market conditions and customer demands, establish distinct markets, strengthen collaborative networks, and invest in innovation (Prahalad & Hamel, 2009; Rice et al., 2001; Secundo et al., 2019).

Innovation as new knowledge integrates into products, processes, and services (Galindo & Méndez, 2014). They categorize innovation into three types: 1) product innovation, 2) process innovation, and 3) administrative innovation. Technological innovation often manifests as entirely new developments or significant improvements in products, processes, or services (Fowosire et al., 2017; Tai et al., 2021). The outcomes of technological innovation may include inventions, designs, new datasets, or advanced knowledge. Product or service innovations aim to meet specific market demands, while process innovations involve introducing new elements into an organization's operations, such as input materials, task specifications, and information flow mechanisms (Mol & Birkinshaw, 2009).

#### METHODOLOGY

The research methodology uses the *Systematic Literature Review* (SLR) approach, which is designed to provide a comprehensive mapping and synthesis of existing literature related to the role of innovation as a mediating and

moderating variable on the performance of Micro, Small, and Medium Enterprises (MSMEs). The SLR approach allows this study to identify, evaluate, and systematically interpret the findings of various previous studies related to the research topic. This is important to overcome gaps in the literature that tend to discuss the influence of innovation on the performance of MSMEs directly, but have not examined in depth the role of innovation as a mediator and moderator between external factors and MSME performance.

#### Identification and Selection of Data Sources

The SLR process begins with identifying and selecting data sources that are relevant to the research topic. The main data source used in this study is academic journal articles available on *Google Scholar*, with a publication range from 2015 to 2024. The selection of Google Scholar as a database is based on the consideration that this platform provides wide access to various scientific journals, so that it is able to provide comprehensive and up-to-date literature.

Keywords used in literature searches include "innovation", "SMEs," "performance," "mediating," and "moderating," which are combined to ensure the scope of the research is appropriate to the topic. Using a combination of these keywords, this search focuses on studies that explore the role of innovation as a mediation or moderation variable in MSME performance.

#### Inclusion and Exclusion Criteria

To maintain the quality and relevance of the included articles, this study applies inclusion criteria: Discussion of innovation as a mediation or moderation variable in relation to MSME performance, published between 2015 and 2024, and available in full text. Exclusion Criteria: Articles that are not relevant to the topic (for example, not including innovation as the main variable or not researching the context of MSMEs), articles with incomplete text, and articles that are not of sufficient quality to be used as scientific references.

From the initial search, 500 articles were obtained that included related keywords. The initial selection process was carried out by reading the title and abstract, which resulted in 180 articles that were considered worthy of further selection. Articles that do not meet the exclusion criteria, as many as 320 articles, are excluded from the review.

#### Article Screening and Selection

The screening process is carried out in several stages to ensure the quality of the articles to be analyzed, namely the Initial Stage: Articles are filtered based on title and abstract to determine their suitability with the focus of the research. Articles that are irrelevant or do not cover the role of innovation as mediation or moderation in the performance of MSMEs are eliminated. Secondary Stage: At this stage, articles that have passed the initial selection are checked for full text to ensure the content and quality of the research. Articles that do not have complete or in-depth data related to the research topic are removed. The result of the final selection process is 35 articles that explicitly discuss innovation as a mediation or moderation variable for MSME performance.

# Data Analysis and Synthesis

After the relevant articles were collected, this study analyzed and synthesized data in a structured manner. This analysis aims to identify the role of innovation both as a mediation and moderation variable in influencing the performance of MSMEs. The analysis process involves the steps of Grouping by Variables, Identifying Types of Innovations, Mediating and Moderating Role Analysis

## Visualization of Results with VOSviewer

To visualize the relationship between the variables in the study, this method uses VOSviewer software. VOSviewer is an effective tool for mapping networks of inter-variable relationships in literature-based research. The results of the mapping with VOSviewer show five main clusters in the variable network studied, namely the SMEs Cluster, Performance Cluster, Innovation Cluster, SME Cluster and Open Innovation.

## RESULTS

There were 500 articles found with the search keywords of innovation, performance, and MSMEs. Of those articles, 320 were excluded based on title and abstract and 180 were screened for eligibility, resulting in 35 articles for review. Figure 1 shows the Prisma flow diagram.



Figure 1. Prisma Flow Diagram

This study found that innovation mediated the relationship between several factors and the performance of MSMEs, as shown in Table 1. Several factors mediated by innovation on MSMEs performance included Organizational Inertia, Social Media Internal Utilization, Business Networks, Learning Capital, Learning Capability, Technology Orientation, Entrepreneurial Orientation, Technological Capability, Transactional Capability, Family Ownership, Network Cooperation, Leadership, Market Orientation, Learning Orientation, Marketing Customer Orientation, Innovation-Orientated Strategies, Technology Assimilation Strategy, Entrepreneurial Competencies, Competitor Orientation, Entrepreneurial Leadership, Strategic, HRM, Human Resource Information System, Entrepreneurial Characteristics, Business Capital, Relational Capability, Digital Platforms, Accounting Information Systems, Knowledge Management Capabilities, and Knowledge Dissemination. Thus, the first research question in the study has been answered.

Table 1. The Role of Innovation As A Mediation Variable				
Authors	Name of Journal	The Role of Innovation as Mediation		
(Le & Mohiuddin, 2024)	Global Journal of Flexible Systems Management	Open innovation mediates the relationship between organizational inertia and firm performance.		
(Alhamami et al., 2023)	International Journal of Professional Business Review	Marketing innovation mediates the relationship between social media internal utilization and MSME performance.		
(Mpando & Sandada, 2015)	International Journal of Social Sciences and Humanity Studies	Innovation mediates the relationship between business networks and the business performance of SMEs. Innovation capability mediates the		
(Siahaan & Tan, 2020)	Asian Journal of Business Research	impact of Learning Capital, learning capability, and Technology orientation on Firm Performance.		
(Asemokha et al., 2019)	Journal of International Entrepreneurship	Business model innovation mediates the relationship between entrepreneurial orientation and international performance.		
(Khan et al., 2023)	Pakistan Journal of Humanities and Social Sciences	Innovation Capability mediates the relationship between Technological Capability and Transactional Capability with Performance.		
(Naidah et al., 2023)	International Journal of Economics Development Research.	Entrepreneurial orientation towards the Performance of SMEs is mediated by business innovation.		
(Mustikowati et al., 2022)	Journal of Economics, Finance and Management Studies.	Innovation capabilities mediate the relationship between family ownership and export performance Innovation performance mediates the		
(Singh et al., 2022)	Journal of Business Research	relationship between network cooperation and firm's economic		
(Majali et al., 2022)	Journal of Open Innovation: Technology, Market, and Complexity.	performance. Green product innovation mediates the relationship between leadership and performance of SMEs		
(Alam et al., 2022)	Journal of Innovative Research in Management Sciences	Market orientation, learning orientation, and marketing strategies on organizational performance are mediated by innovation.		

Authors	Name of Journal	The Role of Innovation as Mediation
(Kankam-	Journal of Management	Service innovation mediates the
Kwarteng et al.,	Journal of Management	relationship between customer
2019)	Research	orientation and firm performance.
,		Process innovation mediates the
(Rochdi et al.,	Polish Journal of	relationship between entrepreneurial
2017)	Management Studies	orientation and firm performance.
		Innovation capability mediates the
(Rhee & Stephens,	International Journal of	relationship between innovation-
		oriented technology assimilation
2020)	Innovation Management	
		strategy and firm performance.
(AlKoliby et al.,	Asia-Pacific Journal of	Innovation mediates the relationship
2023)	<b>Business Administration</b>	between entrepreneurial competencies
/		and SMEs' sustainable performance
(D'souza et al.,	Asia Pacific Journal of	Innovation mediates the relationship
2022)	Marketing and Logistics	between competitor orientation and firm
2022)	Marketing and Logistics	performance
		Innovation capability mediates the
(Bhandari, 2023)	Nimitmay Review Journal	relationship between entrepreneurial
	5	leadership and SMEs performance.
-	International Journal of	Exploratory innovation mediates the
(Poerwanto et al.,	Research in Business and	relationship between market orientation
2022)	Social Science	and corporate performance
	Social Science	Innovation mediates the relationship
(Pushpasiri &	Wayamba Journal of	between entrepreneurial orientation and
Jayampathi, 2021)	Management	
	C C	organizational performance.
(Salisu et al., 2018) (Juhdi & Hashim, 2018)	Asian Journal of	Innovation strategy mediates strategic
	Multidisciplinary Studies International Journal of Business &	relationships and SMEs performance
		Technological innovation on the
		relationship between HRM and firm
2010)	Tehnopreneurship.	performance.
	PalArch's Journal of Archaeology of	Innovation mediates the relationship
$(\Lambda_{\rm ctuti} \text{ ot al} 2021)$		between market orientation and
(Astuti et al., 2021)		entrepreneurial orientation on business
	Egypt/Egyptology	performance
		Innovation capability mediates the
(Mohamed et al.,	International J. of Opers. and	relationship between human resource
2023)	Quant. Management	information systems and organizational
/	Qualit. Management	performance.
		Entrepreneurial characteristics and
(Andjarwati et al.,	International Journal of E-	business capital have an indirect effect
	business and E-government Studies	on marketing performance through
2021)		innovation.
		Product in portion strategies and
		Product innovation strategy, process
(Salisu & Bakar,	International Journal of	innovation strategy, and administrative
(Salisu & Bakar, 2020)	Information and	innovation strategy, and administrative innovation strategy mediate the
(Salisu & Bakar, 2020)		innovation strategy, and administrative innovation strategy mediate the relationship between relational
	Information and	innovation strategy, and administrative innovation strategy mediate the relationship between relational capability and SMEs performance.
2020)	Information and	innovation strategy, and administrative innovation strategy mediate the relationship between relational
2020) (Rahman et al.,	Information and Management Sciences	innovation strategy, and administrative innovation strategy mediate the relationship between relational capability and SMEs performance.
2020)	Information and Management Sciences International Journal of	<ul> <li>innovation strategy, and administrative innovation strategy mediate the relationship between relational capability and SMEs performance.</li> <li>Market orientation towards marketing performance is mediated by product</li> </ul>
2020) (Rahman et al., 2021)	Information and Management Sciences International Journal of Economic Development Research.	<ul> <li>innovation strategy, and administrative innovation strategy mediate the relationship between relational capability and SMEs performance.</li> <li>Market orientation towards marketing performance is mediated by product innovation and process innovation.</li> </ul>
2020) (Rahman et al.,	Information and Management Sciences International Journal of Economic Development	<ul> <li>innovation strategy, and administrative innovation strategy mediate the relationship between relational capability and SMEs performance.</li> <li>Market orientation towards marketing performance is mediated by product</li> </ul>

Authors	Name of Journal	The Role of Innovation as Mediation
(Al-Sharif et al., 2023)	Advances in Social Sciences Research Journal	Innovation capability mediates the relationship between entrepreneurial leadership and innovation performance
(Kareem et al., 2021)	International Journal of Knowledge Management	Innovation mediates the relationship between accounting information systems and knowledge management capabilities on organizational performance.
(Jia-Qi & Chelliah, 2020)	International Journal of Asian Social Science	Innovation mediates the relationship between knowledge dissemination and export performance.

Furthermore, this study found that innovation moderated the relationship between several factors and the performance of MSMEs. Several factors moderated by innovation on MSMEs performance included six exogen (independent) variables: Economic Responsibility, Market Orientation, Total Quality Management, Social Media Adoption, Supply Chain Management Practices, and Learning Orientation. Thereby, the second research question in the study has been answered. Table 2 below depicts the findings related to innovation as a moderation variable of the relationship between six exogen variables and MSMEs performance.

Table 2. Innovation Variable as Moderating Variable				
Authors	Name of Journal	The Role of Innovation as		
Autions	Name of Journal	Moderation		
		Product innovation and Process		
	International Journal of	Innovation moderate the		
(Yan li, 2023)	Social Science and Human	relationship between economic		
	Research	responsibility and export		
		performance		
		Innovation capability positively		
	International Journal of	moderates the relationship		
(Kareem et al., 2021)	Management Concepts	between market orientation and		
	and Philosophy	total quality management to		
		innovation performance.		
		Innovation Capabilities		
(Natasha et al., 2023)	Journal of Accounting and	moderates the relationship of		
	Finance	Social media adoption to Firm		
		Performance		
		Innovation significantly		
(Waiyawuththanapoom,	International Journal of	moderates the relationship		
2020)	Supply Chain	between supply chain		
)	Management	management practices and firm		
		performance.		
	Interdisciplinary Journal	Innovation culture moderates the		
(Sawaean & Ali, 2021)	of Information,	relationship between learning		
· · · · · ·	Knowledge, and	orientation and organizational		
	Management.	performance.		

Table 2. Innovation Variable as Moderating Variable

The analysis findings based on VOSviewer searches from Google Scholar metadata in Figure 2 explained that the network consisted of five main clusters, namely SMEs, Performance, Innovation, SME, and Open Innovation. The SMEs cluster was connected to Business Model Innovation, Entrepreneurial

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Orientation, Innovation Performance, Market Orientation, and Product Innovation. Performance clusters were connected to mediating and moderating effects. The Innovation cluster was connected to firm performance, mediation, and capability. In the SME cluster, it was connected to moderator and innovation capability. Furthermore, the Open Innovation cluster was connected to the moderated mediation model and leadership.



Figure 2. Vosviewer Search Results

#### DISCUSSION

Based on the results, Vosviewer tool explained that the mediation and moderating models are connected to the four main clusters, namely Performance, Innovation, SME, and Open Innovation. Thus, studies on innovation in and MSME performance have used many innovation variables as mediating variables that link exogenous (independent) variables to MSME performance. These findings have proven that research on innovation variables as moderation variables that link exogenous (independent) variables to MSME performance is still relatively not so much. If connected, the results of the Vos viewer (overlay visualization) show that the moderation link in yellow is connected to innovation and performance. Thus, in line with the findings of this study in the 35 selected articles, it can be seen that innovation plays a significant role as a link between external factors and the performance of MSMEs, especially in aspects of market orientation, technological capabilities, and entrepreneurial strategies. This research not only emphasizes the importance of innovation, but also broadens the understanding of how innovation can mediate and moderate the influence of various external factors on MSME performance (Le & Mohiuddin, 2024; Natasha et al., 2023).

In the context of mediation, innovation functions as a link that allows external factors such as market orientation and technology to be more effective in improving the performance of MSMEs. This is in line with previous research which emphasized that innovation capabilities can improve the operational efficiency of MSMEs, which ultimately contributes to improving overall performance (Alhamami et al., 2023; Khan et al., 2023). Thus, this study confirms that innovation is not only a supportive addition, but a key component in optimizing the potential of MSMEs.

In addition, the role of innovation moderation in this study provides new insights into how innovation can strengthen or weaken the influence of external factors on MSME performance. For example, it was found that innovation plays an important role in strengthening the relationship between technological capabilities and MSME performance, which shows that MSMEs that have high innovation can better utilize technology to increase their competitiveness (Aziz, 2022; Waiyawuththanapoom et al., 2020). This finding emphasizes the importance of innovation in amplifying the positive impact of external factors on MSMEs, thus allowing them to be more responsive to market dynamics.

The analysis conducted using VOSviewer shows that innovation is central in the relationship between external factors and the performance of MSMEs, which is divided into five main clusters, namely *SMEs*, *Performance*, *Innovation*, *SME*, and *Open Innovation*. This strengthens the argument that innovation plays a multidimensional strategic role in driving the performance of MSMEs. In the *SMEs* and *Performance* clusters, innovation has been proven to support adaptation to environmental changes and significantly improve the performance of MSMEs (Singh et al., 2022; Sawaean & Ali, 2021).

This result makes a positive contribution to the literature on MSME innovation. While previous studies have addressed the importance of innovation in general, this study provides in-depth insights into how innovation works specifically as a mediation and moderation variable. In other words, innovation is not only a tool for growth, but also a mechanism that helps MSMEs take advantage of external factors such as market orientation and technological capabilities (Le & Mohiuddin, 2024; Rhee & Stephens, 2020).

Furthermore, the results of this research also contribute to the development of MSME business strategies, especially in the face of global competition. In this context, innovation has been proven to support MSMEs' adaptation to rapidly changing market dynamics, through increasing organizational capabilities in facing external challenges. By optimizing the role of innovation, MSMEs can improve their ability to compete in the global market (Mpando & Sandada, 2015; Astuti et al., 2021).

Apart from being a reference for practitioners, the findings of this study also provide direction for further research. One of the recommended research directions is to examine more deeply the specific factors that can be mediated by innovation, such as managerial ability and strategic decision-making. Thus, future research can focus more on the role of innovation in strengthening strategic decisions at the managerial level (Al-Sharif et al., 2023; Bhandari, 2023).

This research also opens up space for further exploration of other external factors that have the potential to be moderated by innovation. For example, market dynamics and technological changes can be studied in relation to the role of innovation as a moderation variable, or green innovation (Guo et al., 2016; Ogbeibu et al., 2020; Rosenbusch et al., 2011). This is important considering that rapid market changes require adaptive innovation strategies to ensure the sustainability of MSMEs (Rahman et al., 2021; D'Souza et al., 2022).

Another important finding is that culture of innovation and product innovation become a component that is often used in studies as a moderation variable. These findings emphasize that a strong culture of innovation within MSME organizations can increase their competitiveness. This suggests that future research can focus on how MSMEs can integrate a culture of innovation into their organizational processes to optimize performance outcomes (Majali et al., 2022; Kareem et al., 2021).

This research emphasizes that innovation, both in the form of product and process innovation, is a key factor in increasing the competitiveness and performance of MSMEs. Therefore, it is hoped that further research can further explore this aspect, especially in looking at the differences in the impact of product innovation and process innovation in different industries (Khattak et al., 2022; Naidah et al., 2023). Innovation plays a complex and multidimensional role in the performance of MSMEs. On the one hand, innovation functions as a mediation that allows external factors to improve the performance of MSMEs, while on the other hand, innovation also plays a moderation role that strengthens or weakens the influence of external factors on the performance of MSMEs (Al-Koliby et al., 2023; Andjarwati et al., 2021).

#### FURTHER STUDY

This study concludes that innovation plays a crucial role as a mediation and moderation variable in improving the performance of Micro, Small, and Medium Enterprises (MSMEs). Based on a literature review of 35 selected articles, innovation has been proven to be able to mediate around 30 exogenous variables, such as market orientation, technological capabilities, and entrepreneurial orientation, in relation to improving the performance of MSMEs. This shows that innovation allows external factors to be more effective in supporting MSMEs to respond to competitive market dynamics. The role of innovation as a mediator reinforces the results of previous studies that recognize the importance of innovation in improving operational efficiency and competitiveness of MSMEs.

In addition to the role of mediation, innovation also functions as a moderation variable that strengthens or weakens the influence of external factors on the performance of MSMEs. The findings show that innovation is able to strengthen the relationship between technological capabilities and MSME performance, as well as other aspects such as economic responsibility and learning orientation. Thus, innovation plays a strategic role in amplifying the positive impact of external factors, allowing MSMEs to be more responsive to changes in the market and customer needs.

The contribution of this research lies in its ability to fill gaps in the literature regarding the role of innovation as a mediation and moderation variable in MSMEs. These findings not only provide a solid theoretical basis for further research but also provide empirical evidence for business practitioners. MSMEs that adopt innovative strategies have proven to be more adaptive and able to increase their competitiveness, both at the local and global levels.

The analysis using VOSviewer identified five main clusters (*SMEs, Performance, Innovation, SME,* and *Open Innovation*) that connect innovation with external factors and the performance of MSMEs. This cluster shows that innovation is not only independent but also closely related to key elements that affect the success of MSMEs. This discovery emphasizes the importance of integrating innovation in MSME business strategies to create sustainable competitiveness. The proposed future research directions include deepening the analysis of specific variables that can be mediated and moderated by innovation, such as managerial abilities and strategic decision-making. Further research is also expected to examine the role of innovation in a more complex context, including technological changes and accelerating market dynamics.

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