

Review

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Systematic Review

The Impact of Porter's Five Forces Model on SMEs Performance: A Systematic Review

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Abstract: Small and medium-sized enterprises (SMEs) are vital to economic growth, yet they face considerable competitive pressures. This systematic review evaluates the impact of Porter's Five Forces on SME performance to provide actionable strategic insights for business sustainability using qualitative and quantitative methods. A thorough search of Scopus, Web of Science, and Google Scholar was conducted, focusing on literature published between 2014 and 2024. Search terms included "Porter's Five Forces," "SME competitiveness," and "competitive advantage." Studies were selected based on predefined inclusion and exclusion criteria, resulting in 51 out of 126 initial studies meeting the inclusion standards. Prominently, industry rivalry and customer bargaining power were found to be the most influential forces, particularly in competitive sectors such as retail and telecommunications, where differentiation and cost leadership play crucial roles. The review concludes that strategically managing Porter's Five Forces can significantly enhance SMEs' competitive advantage and sustainability. SMEs leveraging differentiation and innovation are better equipped to address rivalry and buyer power. In industries such as manufacturing and healthcare, managing supplier power is critical for cost control and quality. Moreover, sectors like renewable energy can capitalize on the low threat of substitutes by fostering innovation. Future research should focus on specific sectors such as technology, retail, and tourism to develop tailored strategies that help SMEs navigate unique competitive pressures more effectively.

Keywords: porter's five forces; small medium enterprises (SMEs); performance; market competition; competitive advantage; systematic review

1. Introduction

In today's rapidly evolving business landscape, Small and Medium Enterprises (SMEs), like all businesses, must adopt strategies that provide competitive advantage, especially in the context of technology-driven competition. With ongoing technological advancements, businesses across all sectors are grappling with the challenge of staying competitive by integrating the latest technologies into their operations [1]. Technology has become a pivotal force, reshaping how firms compete and interact with customers. For SMEs, these technological shifts present both opportunities and challenges, especially in terms of industry rivalry and buyer bargaining power, two key forces from Porter's Five Forces framework. While SMEs are vital for job creation and economic growth—particularly in developing countries, where they play a critical role in poverty alleviation—their ability to survive and thrive depends on how effectively they navigate competitive pressures. By leveraging technology, SMEs can enhance their differentiation and cost leadership strategies, thus improving their competitiveness in increasingly dynamic markets [2].

In marketing, technological marketing has sprouted as a discourse which deals with the planning and execution of conceptualizing, pricing, distributing, and promoting products, which occurs through technology. Technological marketing is the imperative center and extensive driver of business activities and competition since the superior goal for a firm is to satisfy the customer [3].

Technology and competition have become major challenges pervasively impacting on firms in contemporary markets. Increasingly, the industry structure and elements of competition seem to be detrimental, particularly in instances where businesses are lagging with advanced marketing technology systems. Conversely, from the customers' side, opportunities exist which enhance switching mobility in the market for those customers who are acquainted with technology. As technological utilization continues to drive consumers in many industries, the fundamental problem driving this paper is the need to know whether technology (independent variable) constrains or strengthens the competitiveness and performance of SMEs in the business environments (dependent variables). Therefore, this paper investigates the compatibility and prevalence of technological marketing and Porter's five competitive forces, by focusing and competitiveness on SMEs performances.

1.1. Theoretical Background

Porter's Five Force model was first introduced in 1980 and subsequently updated in 2001 and 2008, Porter's model identifies five key competitive forces: the bargaining power of suppliers, the bargaining power of customers, the threat of substitutes, the threat of new entrants, and rivalry among existing firms. However, with the rapid evolution of technology, the question arises: how have these forces been impacted, either positively or negatively, by technological advancements?

Technological evolution and increasing competition have significantly reshaped business practices and strategies, driving firms to adopt superior standards across all operational activities. For SMEs, which often operate with more limited resources than larger firms, the impact of technology on these competitive forces can be particularly pronounced. Although prior studies [4] have explored the effects of technology on competitive marketing, fewer have focused on how technology specifically alters Porter's original model for SMEs. The redefinition of the model, so far, manifest in the addition of a sixth force known as the complementary relationships [5].

This model used herein generally entails that the ultimate impact of the five forces determines the level of competition in industry as well as the profitability thereof. The model is fraught of its criticisms; among other things, the question on the appropriateness of developing and analysing the corporate strategy at industry level rather than firm level, failure to consider the heterogeneity within an industry, capability of businesses to raise industry entry barriers individually or collectively, and the consistence of earning above-normal profits [6]. However, the model still commands substantive grounds as an instrument of assessing competition. For SMEs as in other industries, Porter's model states that the weaker/stronger the forces are, the more/less attractive the industry becomes as a whole as well as its overall profits. The forces in Porter's Five Forces Model are elaborated below:

1.1.1. Threat of New Entrants

Porter describes the threat of new entrants as the risk posed by new competitors entering the market and the protective barriers that shield existing firms from heightened competition [7]. For SMEs, new entrants can disrupt the market by driving down prices, reducing profit margins, and potentially displacing established firms [8]. For example, in the retail industry, the rise of e-commerce platforms has lowered entry barriers, allowing small players to easily enter the market with minimal physical infrastructure. This has intensified competition for traditional SMEs, who must now innovate to maintain their market positions.

The magnitude of this threat is determined by the strength of barriers to entry and the response of existing competitors. High entry barriers, such as significant capital requirements or intellectual property protections, reduce the threat. For SMEs, technology can either reduce or reinforce these barriers. For instance, while cloud computing lowers the capital barrier for startups by reducing the need for on-site infrastructure, SMEs in industries reliant on patented technologies (e.g., pharmaceuticals) may still find high entry barriers. Additionally, a strong response from incumbent firms, such as aggressive pricing or marketing strategies, can deter new entrants. SMEs can mitigate this threat by leveraging their local knowledge and niche markets where larger firms are less competitive [9].

1.1.2. Threat of New Substitutes

Substitutes are products or services that perform similar functions to existing offerings but through different means. For SMEs, the threat of substitutes can be particularly challenging in industries where innovation and technological advancements occur rapidly. For example, traditional taxi services have faced substantial disruption due to ride-hailing apps like Uber and Bolt, which offer consumers a more convenient and often cheaper alternative. This forces SMEs to continuously innovate to remain competitive.

Substitutes intensify competition by enabling customers to switch between products or services, pushing firms to maintain high standards in quality, performance, and pricing [10]. SMEs in the food and beverage sector, for instance, have seen increased competition from plant-based alternatives, compelling traditional meat producers to invest in developing new products or risk losing market share. Technology plays a crucial role in accelerating the development and adoption of substitutes, further heightening competition for SMEs.

1.1.3. Rivalry amongst Existing Competitors

Rivalry refers to the competition between businesses within an industry to gain market share. For SMEs, rivalry is particularly intense in industries where firms offer similar products or services and are closely matched in size and capabilities. An example is the highly competitive restaurant industry such as McDonald's and Burger King, where SMEs often compete on price, service, and customer experience. High levels of rivalry can lead to price wars, reducing profitability, and increasing investments in non-price competitive strategies such as branding or customer service [11].

Technology further exacerbates this rivalry, as digital marketing tools allow businesses to reach wider audiences at lower costs, intensifying the competitive landscape. SMEs that do not adopt advanced marketing strategies, such as data analytics or social media campaigns, may struggle to differentiate themselves from competitors. In contrast, firms that leverage these technologies can improve their market position by offering personalized services and engaging more effectively with customers [12].

1.1.4. The Bargaining Power of Buyers

The bargaining power of buyers relates to their ability to influence prices and demand higher quality products or services. In markets where a few large customers dominate, such as in the B2B sector, SMEs may face strong buyer bargaining power, which can erode profit margins. For example, small manufacturers supplying to large retailers often have little negotiating power, as the buyers can demand lower prices or better terms [13].

The rise of digital platforms and e-commerce has further increased buyer power by providing consumers with access to a broader range of products and services, enabling them to compare prices and switch between suppliers with ease. SMEs must adapt by offering differentiated products or superior customer service to retain customer loyalty [14]. Additionally, the threat of backward integration—where buyers become their own suppliers—poses a significant challenge for SMEs. For example, large retailers like Amazon have moved into manufacturing their own products, bypassing smaller suppliers [15].

1.1.5. The Bargaining Power of Suppliers

The bargaining power of suppliers refers to their ability to influence the prices of raw materials or services provided to businesses. For SMEs, this can be particularly problematic when suppliers have significant control over the supply chain, as in industries where there are few alternatives. For example, small electronics manufacturers may face high supplier power due to the dominance of key component suppliers, such as those providing microchips [17].

Technology can both increase and decrease supplier power. On one hand, digital platforms have made it easier for SMEs to find alternative suppliers globally, reducing dependency on a few dominant players. On the other hand, suppliers that control access to crucial technologies—such as

cloud computing services or specialized software—may hold significant bargaining power, increasing competition for SMEs reliant on these services [18]. Forward integration, where suppliers become direct competitors by entering the market themselves, also poses a risk. For example, in the fashion industry, some fabric manufacturers have expanded into producing finished clothing, intensifying competition for SMEs [19].

The introduction of new technologies can either mitigate or exacerbate these dynamics. For instance, SMEs that adopt cutting-edge marketing technologies can increase their competitiveness, but they may also face reduced profitability if the market becomes saturated with new entrants [21]. Figure 1 represents Porter’s Five Forces.

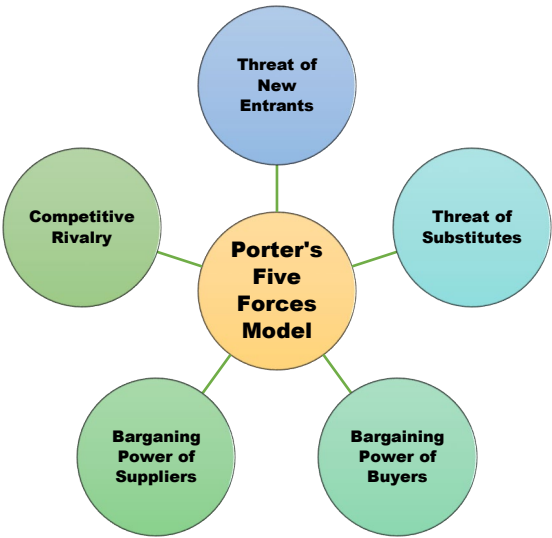


Figure 1. Porter’s Five Forces Model.

Table 1 compares different studies related to the impact of Porter’s Five Forces on SMEs. Each study is reviewed for its contribution to the topic and its pros and limitations. The papers are also categorized by the number of times they have been cited and the year of publication.

Table 1. A comprehensive study of the current review literature and the suggested systematic review.

Ref	Cites	Year	Contributions	Pros	Cons
[22]	43	2014	Reviews the use of cost leadership, differentiation, and focus strategies by SMEs in Nairobi and their impact on performance.	Provides relevant data on MSEs in a developing economy.	Findings limited to Nairobi and small-scale enterprises.
[23]	2	2014	Examines how Japanese SMEs apply Porter’s Five Forces in business intelligence to improve competitiveness.	Focuses on integration of competitive forces into business intelligence practices.	Limited to Japanese SMEs; may not apply to other cultural contexts.
[24]	152	2016	Provides a comprehensive review of strategic management theories and their relevance to SME growth and sustainability.	Summarizes diverse strategies applicable to SMEs, offering a broad theoretical foundation.	Lacks empirical evidence; more of a theoretical review than practical analysis.
[25]	24	2017	Analyses the competitive forces shaping the Kenyan telecommunications sector using Porter’s model	Applies Porter’s Five Forces to a specific industry, providing actionable insights.	Focuses only on one sector, limiting cross-industry application.

			Reviews how technological SMEs use an adapted version of Porter's Five Forces to enhance the strategic accuracy of their innovations	Offers insights into the strategic management of technology-driven SMEs and innovation.	Focuses on technological SMEs, which may not apply to non-tech sectors
[26]	8	2020	Provides a systematic review of literature on responsible innovation in SMEs and proposes a conceptual model for integrating responsible innovation practices.	Offers a comprehensive overview of responsible innovation and practical implications for SMEs.	Focuses on conceptual models rather than empirical data, which may limit practical application.
[27]	49	2020	Analyses co-citation patterns to review the antecedents, conceptualization, and consequences of digitalization capabilities	Provides a detailed analysis of digitalization research trends and key concepts.	May lack practical applications for SMEs specifically; focuses on academic co-citation patterns.
[28]	252	2021	Reviews and meta-analyses the impact of eco-innovation on firm performance, exploring whether eco-innovation is a friend or foe to business success	Provides a comprehensive analysis of eco-innovation's effects on firm performance, offering insights into its benefits and challenges.	May not focus specifically on SMEs; broad review could dilute applicability to smaller firms.
[29]	13	2022	Reviews various competitive strategies employed in the apparel industry, including cost leadership, differentiation, and innovation.	Offers insights into strategic practices specific to the apparel sector, providing a focused view on industry-specific strategies	Limited to the apparel industry, which may not apply to other sectors.
[30]	2	2022	Analyses Amazon's business and financial performance over three years, evaluating factors contributing to its exceptional success.	Provides in-depth analysis of Amazon's performance, offering valuable insights into its strategic success.	Focuses specifically on Amazon, which may limit generalizability to other companies or industries.
[31]	16	2023	Reviews the impact of digital marketing strategies on SME performance, highlighting key trends and outcomes.	Offers insights into how digital marketing affects SMEs, including benefits and challenges.	Focused on digital marketing; may not address other factors influencing SME performance.
[32]	65	2023	Investigates how financial literacy contributes to the sustainability and performance of MSMEs in Samarinda City.	Highlights the role of financial literacy in enhancing MSME sustainability, offering practical implications for business owners.	Focused on MSMEs in a specific geographic location; may not be generalizable to other areas
[33]	1	2023	Reviews literature on the role of managerial competencies in ensuring business continuity and resilience.	Provides a comprehensive overview of essential managerial skills for business continuity.	May lack specific empirical data; primarily theoretical review
[34]	8	2023			
Proposed Systematic Review			The review advances the understanding of Porter's Five Forces in SMEs,	This systematic review offers a comprehensive analysis of competitive	

offering valuable insights into how these forces affect small enterprises differently from large firms. It also identifies gaps in research, particularly in the impact of digital platforms and e-commerce on SME competitiveness, providing direction for future studies and policy recommendations.	forces affecting SMEs and provides practical guidance for leaders to enhance business performance. It also highlights how technological innovation and digital transformation reshape competitive dynamics, offering actionable strategies for SMEs to navigate these challenges.
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From the summarized review papers, it can be noted that several research gaps exist in the studies. For one, there’s a limitation in the geographic focus. Majority of the studies focus on specific regions such as Kenya and Japan. Meaning that the results may not be applicable to many regions. There’s also a lack of empirical data. Some of the studies cited are theoretical and lack empirical evidence. This then limits the practical applicability of the studies. Another research gap that has been identified is the fact that studies are limited to specific sectors. This implies that there is a limitation in applying the results across multiple sectors. There is minimal research that generalizes across multiple industries. The identified gaps highlight a need for new additional research that will be broad and applicable amongst many sectors.

1.2. Research Questions

Understanding how Porter’s Five Forces Impact SMEs play a vital role in the strategic management and improvement of enterprise performance. Porter’s Five Forces provides a framework for scrutinizing competition dynamics and pressures within an industry, and how they affect organizational performance. This systematic review evaluates how Porter’s Five Forces impact the performance of SMEs. To assist in critically analyzing the impact of the forces, the following research questions have been asked:

- How does the bargaining power of suppliers impact the performance of SMEs in various industries?
- What is the effect of buyer bargaining power on the competitive positioning and financial performance of SMEs?
- How do threats from substitute products or services influence innovation and strategic decisions in SMEs?
- To what extent do barriers to entry affect the growth and sustainability of SMEs in competitive markets?
- How does competitive rivalry within the Information Technology (IT) sector influence the strategic responses and performance outcomes of SMEs?

1.3. Research Motivation

The rationale of this review can be summarized as follows:

- SMEs are critical for economic growth, employment, and innovation in both developed and developing economies. However, they face distinct challenges such as limited resources, market volatility, and competition from larger firms. Thus, understanding the factors influencing their performance is vital for their sustainability and growth. For instance, research on SMEs in Nairobi highlights the significance of cost leadership, differentiation, and focus strategies on driving performance, although findings may be context-specific to the region.
- The Porter’s Five Forces Model, a widely recognized framework for analyzing industry structure and competition. Despite its extensive use in large corporations, its application to SMEs remains underexplored. Given SMEs’ unique characteristics—such as flexibility and resource

constraints—this gap presents an opportunity for further study. Existing literature, such as research on Japanese SMEs integrating the Five Forces into business intelligence, offers insights but may not be generalizable to other cultural or industrial contexts.

- The systematic review seeks to fill the gap by synthesizing research on the application of Porter's Five Forces to SMEs. While studies have focused on specific sectors, such as telecommunications in Kenya and technological innovations in SMEs, the broader impact of competitive forces on SME performance across various industries and regions remains underexplored. Moreover, the growing influence of digital platforms and e-commerce, which are reshaping the competitive landscape for SMEs, has not been adequately addressed. By examining these dynamics, this review aims to provide insights into strategic responses of SMEs and identify best practices to enhance their resilience in an increasingly globalized market. These insights are crucial for shaping business strategies, policy interventions, and future academic research aimed at improving SME performance.

1.4. Research Contribution

This review makes a significant contribution offering a comprehensive analysis of how Porter's Five Forces Model impacts SMEs.

- It consolidates literature across various industries to reveal how competitive forces such as the threat of new entrants, bargaining power of suppliers and buyers, the threat of substitutes, and industry rivalry affect SMEs differently compared to larger firms. For example, while research on the apparel industry explores competitive strategies specific to that sector, the findings may not be broadly applicable to other industries.
- This review delves into how technological innovation, digital transformation, and globalization have reshaped competitive forces for SMEs. Studies show that digital platforms and marketing strategies are increasingly influencing SME performance. This review offers new insights into how SMEs adapt their strategies in response to these technological shifts, contributing to their strategic positioning in a rapidly changing market.
- Identifies key gaps in current research, particularly concerning the effects of emerging trends such as digital platforms and e-commerce on SMEs' competitive strategies. By addressing these contemporary developments, the review not only advances theoretical understanding but also provides practical guidance for SME managers and policymakers. This enhanced perspective helps in better navigating the complex and evolving competitive landscape, offering actionable insights for improving SME performance and strategic positioning in a rapidly changing global market.

1.5. Research Novelty

This systematic review provides a novel contribution by examining how Porter's Five Forces Model, which has been extensively applied to all types of businesses, with varying degrees of focus on SMEs across various industries and geo-graphic regions. The review synthesizes existing literature to investigate how emerging factors such as technological advancements, globalization, and digitalization have reshaped the competitive forces affecting SMEs. Unlike larger firms, SMEs have unique characteristics such as limited re-sources, agility, and innovation, which influence their responses to competitive pressures.

For instance, technological advancements like cloud computing and automation have allowed SMEs to scale operations with fewer resources, making them more competitive against larger firms with greater infrastructure. However, they also increase rivalry, as more small businesses can now enter the market and compete globally. Similarly, globalization has expanded market opportunities for SMEs, enabling them to access international markets and global supply chains, but it has also heightened the bargaining power of suppliers and buyers, as SMEs now face more global competitors and price-sensitive customers. Digitalization, particularly the rise of e-commerce and digital platforms, has transformed how SMEs interact with customers, often reducing barriers to entry but also exposing them to increased threats from new entrants and substitute products available online.

This study also identifies research gaps, particularly in relation to the impact of digital platforms, e-commerce, and global supply chains on SMEs’ competitive environment. By addressing these contemporary dynamics, the review offers a forward-looking perspective on how SMEs adapt their strategies to maintain competitiveness in an increasingly interconnected and volatile global market.

2. Materials and Methods

2.1. Eligibility

To ensure the quality and relevance of the research included in this review, specific eligibility criteria were established. The review focuses on literature that examines the impact of Porter’s Five Forces on the performance of SMEs, with a ten-year publication window from 2014 to 2024. This period was selected to capture recent developments and trends that reflect the current business environment and technological advancements affecting SMEs. To avoid potential bias and inaccuracies, only studies published in English were included. However, this decision may limit the review’s scope, as valuable insights from non-English studies are excluded. The review criteria emphasize studies that explicitly analyze the influence of the Five Forces framework on SME performance. The inclusion and exclusion criteria are outlined in Table 2, specifying the focus on relevant research while acknowledging potential limitations in scope and translation

Table 2. Proposals for Inclusion and Exclusion Criteria.

Criteria	Inclusion Criteria	Exclusion Criteria
Topic	Articles focusing on the impact of Porter’s Five Forces on SMEs performance	Articles that do not focus on the impact of Porter’s Five Forces on SMEs performance
Research framework	Articles should include methodology for analyzing the Five Forces on SMEs performance	Articles that do not include a methodology for analyzing the Five Forces on SMEs performance
Language	Papers written in English	Papers written in other languages
Period	Publications between 2014 and 2024.	Publications outside 2014 and 2024.

2.2. Information Sources

For this systematic literature review, we consulted three online databases, namely, Google Scholar, Web of Science and Scopus. Using keywords, we were able to retrieve various articles, conference papers, literature reviews dissertations and theses that relate to the topic. We scanned through the title and abstract to further reaffirm relevancy of the extracted papers.

2.3. Search Strategy

We adopted a keyword search code strategy to maximize the search on online repositories. This search code comprises of a variation of terms that are in the research topic or are synonymous with the research topic. Acronyms were also expanded to broaden the search, for instance, “SME” was expanded into “Small and Medium Enterprises”. To ensure a thorough search of the previously mention databases, the code (“Porter’s Five Forces” OR “Five Forces” OR “Porter’s Model” OR “Five Forces Model”) AND (“SMEs” OR “Small and Medium Enterprises” OR “Small Businesses” OR “Medium Enterprises”) AND (“performance” OR “business performance” OR “competitiveness” OR “strategic performance” OR “sustainability”) AND (“systematic review” OR “literature review” OR “meta-analysis” OR “review of literature”) was employed. This code has all the possible terms related to the topic. Boolean operators “AND” and “OR” were utilized to combine the various search keys. To maintain a standard of relevancy, the inclusion criteria of papers that are within a 10-year range was highly considered.

Table 3. Search Terms Used in SLR.

Search Terms& Strategy				Data Bases	Fields
Porter’s Five Forces OR Poter’s Model OR Five Forces Or Five Forces Model	SMEs OR Small and Medium Enterprises OR Small Businesses OR Medium Enterprises	Performance OR business performance OR competitiveness OR strategic performance OR sustainability	AND	Google Scholar Web of Science SCOPUS	Title, Abstract Keywords

2.4. Selection Process

Initially, 483 records were retrieved based on the keyword search string (“Porter’s Five Forces” OR “Five Forces” OR “Porter’s Model” OR “Five Forces Model”) AND (“SMEs” OR “Small and Medium Enterprises” OR “Small Businesses” OR “Medium Enterprises”)

AND (“performance” OR “business performance” OR “competitiveness” OR “strategic performance” OR “sustainability”) AND (“systematic review” OR “literature review” OR “meta-analysis” OR “review of literature”). Inclusion and exclusion criteria were applied, such as limiting the search to publications from 2014 to 2024, focusing on English language-based articles and studies relevant to the impact of Porter’s Five Forces to SMEs. This elimination processed removed a total of 357 papers, leaving 126 for selection. Out of the 126 papers, 20 duplicates were removed, and an extra paper was eliminated due to the fact that it did not contain the full text.

The remaining 105 articles were further screened based on titles, abstract, keywords and on body text screening. 48 papers were removed due to a lack of focus on Porter’s Five Forces and its’ impact on SME performance. During full-text screening of the remaining 57 papers, 6 were removed for not providing sufficient quantitative data or not meeting the quality assessment threshold (e.g., those lacking peer-review status). In the final stage, 51 articles were selected for in-depth analysis. To minimize subjective bias, three independent reviewers evaluated each article, with discrepancies resolved through discussion or a fourth reviewer. This process ensured a transparent and replicable selection, focusing only on high-quality, relevant studies.

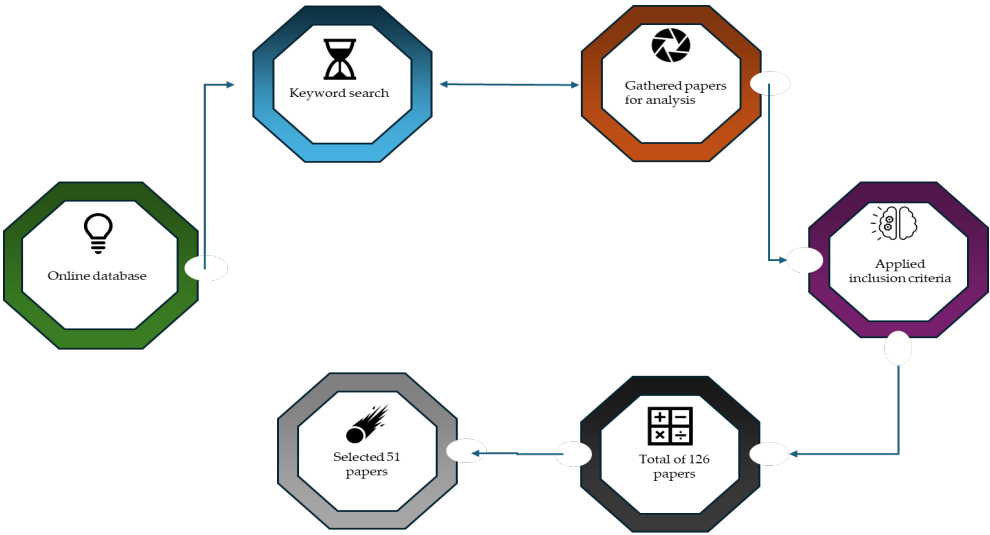


Figure 2. Systematic Literature Review: Paper Selection Process.

2.5. Data Collection Process

The flow chart in Figure 3 outlines the data collection process used in the study, emphasizing a comprehensive secondary research approach. Various data sources, including journals, theses, conference papers, and systematic reviews, were analysed using both qualitative and quantitative methods. Three independent reviewers extracted the data to ensure thoroughness and minimize bias.

In cases where disagreements arose, a consensus-building process was employed, involving discussion and deliberation among the reviewers. If consensus could not be reached, an arbitration method was used, where a fourth independent reviewer acted as a mediator to resolve any remaining disputes. This approach helped ensure accuracy, transparency, and reliability in the final results.

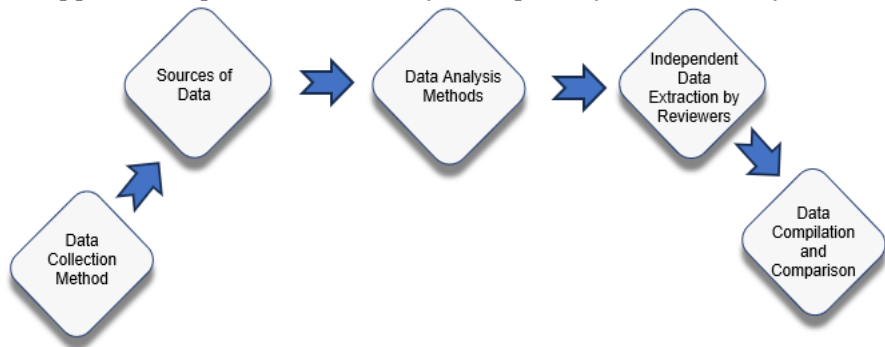


Figure 3. Data Collection and Analysis Process.

2.6. Data Items

Table 4 lists the key parameters used to examine the effects of Porter’s Five Forces on SMEs, including both performance indicators like profitability, market share, growth rate, innovation, and adaptability, as well as force-specific variables for each of Porter’s Five Forces. Metrics such as supplier concentration and switching costs (bargaining power of suppliers), barriers to entry and capital requirements (threat of new entrants), product differentiation and availability of substitutes (threat of substitutes), the number of competitors and intensity of competition (competitive rivalry), and customer concentration and price sensitivity (bargaining power of buyers) have been included. These metrics provide a focused analysis of how each of the forces influences SME performance.

To offer a comprehensive overview of the research analysed, Table 4 also highlights key variables like sample size, sample characteristics, geographic location, and economic context. Sample characteristics, such as the role of interviewees (e.g., CEOs, employees, industry experts), will be categorized based on their contribution to each force’s impact and treated as covariates in the analysis to explore their moderating effects. Geographic location and economic background will be categorized by region and economic status (developed or developing countries) and analysed to determine how these factors influence the forces’ effect on SMEs’ competitiveness in varying contexts.

Table 4. Parameters for Analyzing the Impact of Porter’s Five Forces on SMEs.

Parameter	Description
Profitability	Financial gain and profit margin of the SME
Market Share	Total sales in an industry generated by a particular SME
Growth Rate	Percentage change in GDP, turnover, or wages from one period to another
Innovation	Ability of the SME to introduce new products or services
Supplier Concentration	Degree of dependence on a few suppliers (related to Bargaining Power of Suppliers)
Supplier Switching Costs	Costs incurred by SMEs when changing suppliers (Bargaining Power of Suppliers)
Barriers to Entry	Difficulty for new firms to enter the market (related to Threat of New Entrants)
Capital Requirements	Financial investment required to enter the industry (Threat of New Entrants)
Product Differentiation	Extent to which products or services differ from competitors (related to Threat of Substitutes)
Availability of Substitutes	Presence of alternative products or services in the market (Threat of Substitutes)
Competitive Rivalry	Level of competition among existing SMEs in the market (Competitive Rivalry)

Number of Competitors	Number of firms operating in the same industry (Competitive Rivalry)
Customer Concentration	Degree to which SMEs depend on a few large buyers (Bargaining Power of Buyers)
Buyer Price Sensitivity	Extent to which customers are price-sensitive (Bargaining Power of Buyers)
Adaptability	Ability to withstand and adjust to environmental changes
Sample Size	Number of interviewees, papers analyzed, or companies studied
Sample Characteristics	Defining traits of samples used (e.g., SME, employees, CEOs, experts)
Geographical Location	Location of where the studies were conducted
Economic Context	Status of countries studied (developing or developed)

2.7. Study Risk of Bias Assessment

The Newcastle-Ottawa Scale (NOS) is a widely used tool for assessing the quality of non-randomized studies in meta-analyses, employing eight distinct criteria across three main categories: selection, comparability, and outcome assessment. The scale utilizes a star-rating system, where a score of 7 or higher indicates high-quality research, a score of 6 denotes moderate quality, and a score of 5 or below signifies low-quality research [35]. In this study, the NOS was used to evaluate the risk of bias in the selected research articles. The selection category allows for up to 4 stars, assessing the adequacy of the research strategy, the representativeness of the included studies in the SME context, the overall quality of studies (with an emphasis on peer-reviewed journal articles), and the clarity of inclusion criteria. In the comparability category, which allows for a maximum of 2 stars, the review examines whether the studies assessed for risk of bias and differences in methodology could impact the results, and whether consistent indicators of SME competitiveness were used across studies. For outcome assessment, which can earn up to 3 stars, the review evaluates the relevance of the results to the review’s objectives, particularly regarding Porter’s Five Forces and its application to SME competitiveness, the depth of discussion surrounding the implications of these findings for SME strategies, and whether the conclusions are well-supported by the presented data and findings.

While the star-rating system in the NOS provides a standardized approach to evaluating study quality, it is not without limitations. The system’s subjectivity can lead to inconsistencies, as individual reviewers may interpret criteria differently, resulting in variations in the number of stars assigned. Furthermore, the binary nature of assigning stars may oversimplify complex study characteristics, potentially overlooking subtle differences in study design or execution. Acknowledging these weaknesses is important when interpreting the results of a risk of bias assessment



Figure 4. Risk of Bias Assessment and Evaluation Process.

2.8. *Effect Measures*

The flow chart outlines the process used to synthesize and present the effect measures for each outcome in the study. It begins with specifying the effect measures, followed by applying risk ratios to compare possible outcomes across groups. Mean differences are utilized for continuous outcomes like profit margins, while standardized mean differences address variations in measurement scales. For likelihood-based outcomes, odd ratios are applied, and hazard ratios are used for time-to-event data, such as the duration SMEs can sustain competitive advantage. Confidence intervals are presented to ensure the accuracy and consistency of the results, providing a precise analysis of the Five Forces’ impact on SME performance.

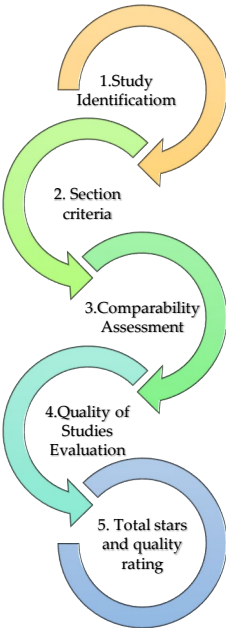


Figure 6. A Cyclical Feedback Loop Illustrating the Iterative Process of Continuous Improvement.

2.9. Synthesis Methods

In the process of conducting a systematic review on the impact of Porter’s Five Forces on SME performance, a rigorous and multi-faceted approach was employed to ensure the accuracy and reliability of the findings. The following table outlines the comprehensive methodology used throughout the review process. It details how studies were selected and reviewed, the methods used for data preparation and analysis, the techniques for visualizing results, and the strategies employed to address heterogeneity among study results. This structured approach aimed to provide a thorough and systematic understanding of the research question and ensure the robustness of the conclusions drawn.

Table 5. Methodology for Systematic Review on Porter’s Five Forces and SME Performance.

Section	Description
Study Eligibility and Review	Determined study eligibility using inclusion and exclusion criteria for Five Forces and SMEs.
Data Preparation and Consistency	Unified coding of variables between studies for consistent labeling and analysis.
Data Tabulation and Visualization	Organized study information into data extraction tables. Visualization tools were chosen based on the data types: histograms for frequency distributions, pie charts for comparison between trends and tables. These visualizations were selected to provide clear and intuitive representations of both qualitative and quantitative data, enhancing the understanding of complex relationships between variables.
Qualitative and Quantitative Analysis	Thematic analysis was used for qualitative data to identify common themes, while narrative synthesis was applied to non-quantifiable findings. For quantitative data, meta-analysis techniques were employed where appropriate.
Heterogeneity Analysis	Subgroup analyses were conducted based on factors such as industry sector, geographical region, and SME size to explore differences across studies. Heterogeneity was assessed using the I ² statistic, with values above 50% indicating significant heterogeneity, prompting random-effects models. Thresholds for acceptable heterogeneity were defined in line with PRISMA guidelines.

2.10. Reporting Bias Assessment

In our examination, we carefully considered the potential of reporting bias, where select outcomes or findings may be disclosed while others could be omitted. This type of prejudice can skew conclusions by exaggerating the strength or consistency of certain effects.

To address this problem, we examined the methodology and results sections of every study to determine if the results were consistent with the initial objectives. We verified that all pertinent outcomes were incorporated. If data appeared to be lacking or not fully provided, we acknowledged these concerns and considered their potential impact on the overall assessment. We acknowledged the potential of publication bias, where studies showing positive results are more likely to be published than those with neutral or negative results. To reduce this risk, we ensured to encompass a diverse selection of studies from different sources and environments, guaranteeing a more comprehensive viewpoint. This assisted us in obtaining a more precise representation of the available evidence.

2.11. Certainty Assessment

To comprehensively assess and mitigate the effects of reporting bias in our study, we utilised a set of 5 Quality Assessment (QA) questions. The quality assessment questions were designed to evaluate the rigor, reliability and relevance of the research studies included in this review. The detailed QA process ensures that only studies meeting a certain threshold of methodological quality are considered in the analysis, thereby reducing the risk of bias, and ensuring that the findings are based on robust evidence. To determine Quality Assessment of the studies, we rated each study with a score of 0 or 0.5 or 1 as per the quality assessment questions. A score of 0 means that the criteria was not met, a scale of 0.5 indicates that the criteria was partially met whilst a score of 1 indicates that the criteria was fully met.

Despite the thoroughness of the QA process, there are still inherent limitations. Once again, a significant limitation is the subjective nature of the quality assessments, as different reviewers may interpret and apply the QA criteria inconsistently, leading to variations in judgments. Additionally, while the QA questions help identify methodological weaknesses, they do not fully account for publication bias, where studies with negative or null findings are less likely to be published. This could result in an over-representation of studies reporting positive outcomes. Lastly, the QA questions focus primarily on internal validity, which may overlook broader contextual factors or external validity issues that could affect the generalizability of the findings.

When it comes to Grey literature, we subjected it to the same rigorous quality assessment test to determine if it met the criterion to be included in the review. If the study met the same quality threshold as peer-reviewed studies, we included it. However, given the potential variability in quality, grey literature was scrutinized more closely for biases, especially since these sources may not undergo the same rigorous peer-review process. To ensure fairness, unpublished studies were evaluated with the same Quality Assessment (QA) tools but were assigned a slightly lower weight in the final analysis due to the potential for incomplete or less formalized review processes.

While the QA process strengthens the rigor of our review by filtering out lower-quality studies, it is important to acknowledge these limitations when interpreting the results. The quality assessment questions are tabulated in Table 6.

Table 6. Proposed Research Quality Assessment Questions.

Quality Assessment (QA)	Research Quality Assessment Questions
QA1	Is the research question clearly stated?
QA2	Does the research clearly specify the data collection methods?
QA3	Was the sampling technique appropriate and clearly described and was the sample size sufficient?
QA4	Does the research have a clear research methodology?
QA5	Do the research findings contribute to existing literature on the topic of the impact of porter’s five forces model on SMEs?

3. Results

3.1. Results of Study Selection

Figure 7 presents a PRISMA flow diagram that outlines the study selection process for a systematic review. Initially, 483 records were observed from the online sources through the use of the keyword search string. 471 from Google Scholar, 6 from Web of Science and 6 from Scopus. After the application of the inclusion and exclusion criteria, 357 papers were eliminated and a total of 126 were collected. Through a further evaluation, 20 duplicates were discovered and promptly removed. Leaving a total of 105 papers to be screened. 54 papers were then excluded because they did not meet the research eligibility criteria and 1 paper was excluded because it lacked the full text. Ultimately; 51 papers were used for the study.

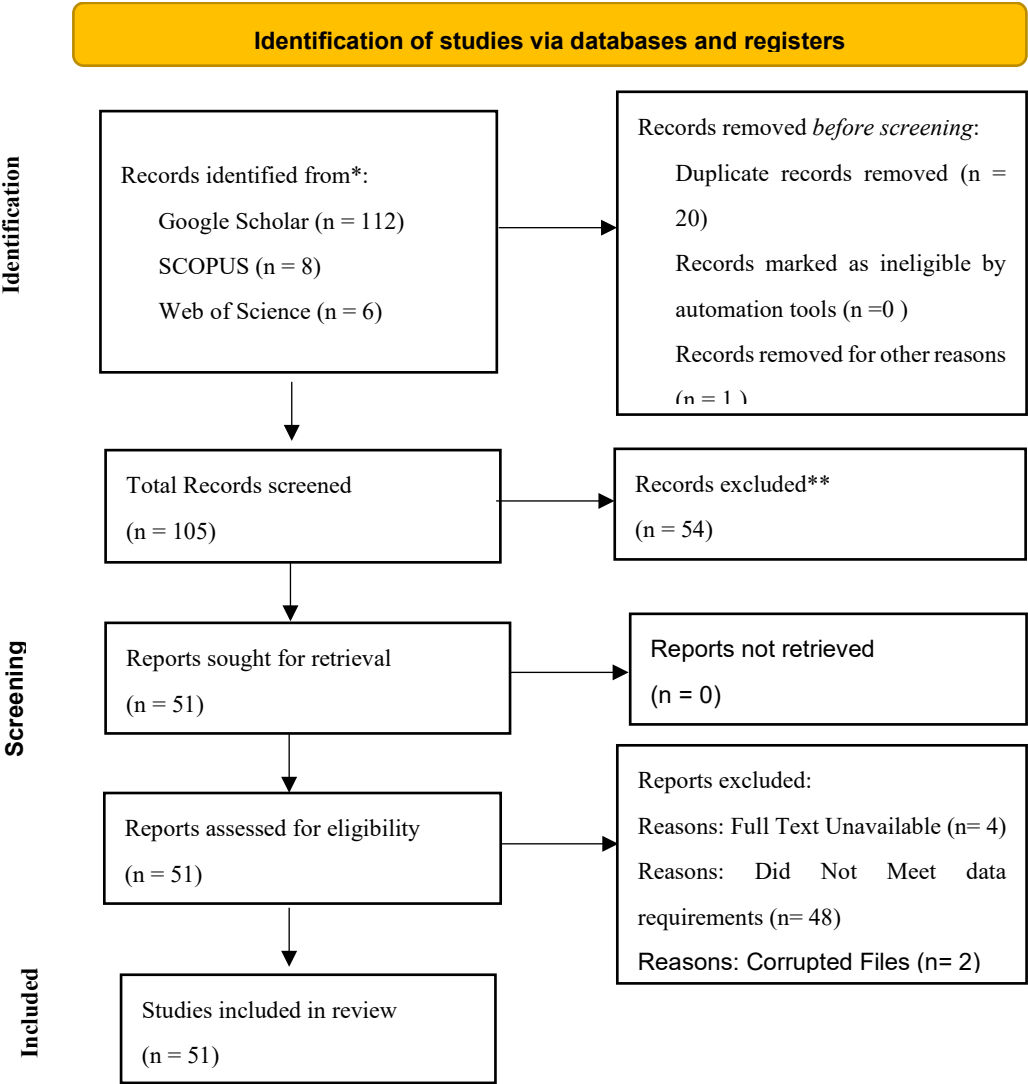


Figure 7. Proposed PRISMA Flowchart.

Figure 8 presents a pie chart illustrating the distribution of sources used for academic research, specifically from three platforms: Google Scholar, SCOPUS, and Web of Science. Google Scholar is the dominant source, accounting for 78% of the total, while SCOPUS is 12% and Web of Science contributes 10%. This distribution highlights the significant reliance on Google Scholar for sourcing research materials, likely due to its accessibility and comprehensive database. SCOPUS and Web of Science, though smaller in their contributions, are recognized for their credibility and indexing of high-quality, peer-reviewed articles. However, the relatively lower usage of these platforms may suggest limited access or familiarity among the researchers or the preference for broader, more diverse resources available through Google Scholar. The data implies a need for researchers to diversify their sources to ensure comprehensive literature coverage.

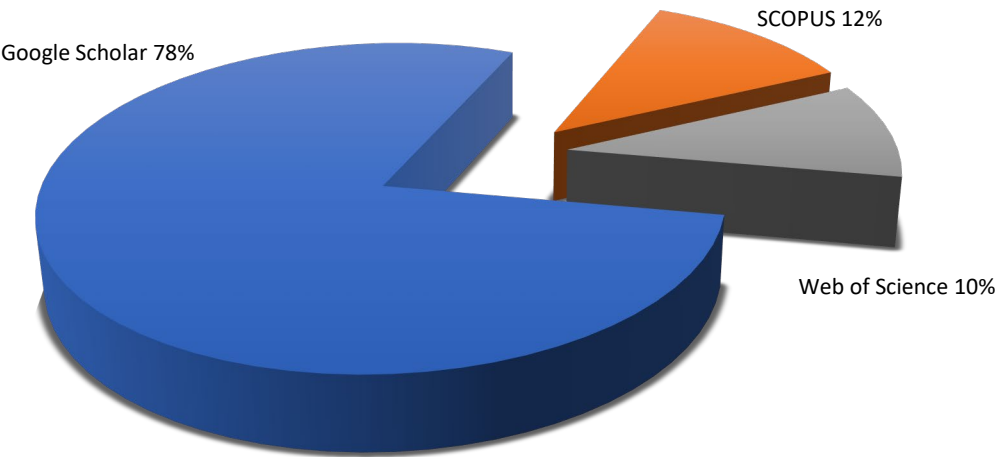


Figure 8. Distribution of Online Data Sources.

3.2. Eligible Studies Attributes

Table 7 highlights the distribution of conference papers, dissertations, and journal articles published from 2014 to 2024. Conference papers exhibit fluctuations, with peaks in 2014, 2017, 2021, and 2023, while some years, such as 2015, 2016, and 2018, recorded no publications. Dissertations were published sporadically, with 2 each in 2014, 2019, and 2020, indicating concentrated academic research during those years. In contrast, journal articles display a consistent upward trend, particularly from 2018 onwards, with significant increases in 2022 and 2023, reaching 7-8 articles per year. This suggests a growing preference for journal articles as the primary mode of research dissemination, reflecting the academic community’s emphasis on peer-reviewed publications.

Table 7. Momentary View of Research Works Contained Herein by Published Year.

Published Year	Conference Paper	Dissertation	Journal Article
2014	2	2	1
2015	0	0	1
2016	0	0	3
2017	3	1	1
2018	0	0	5
2019	0	2	1
2020	0	2	4
2021	2	0	2
2022	0	0	7
2023	2	0	8
2024	0	0	2

Figure 9 presents a line graph depicting the number of publications from 2014 to 2024. The graph shows fluctuations in the number of publications across this period, with notable peaks and troughs. In 2014, there were 5 publications, followed by a significant drop to just 1 in 2015. The number of publications then rebounded in 2016 and remained stable in 2017 and 2018, with 5 publications each year. After another dip in 2019 (3 publications), the trend picks up again, peaking at 6 in 2020 and then fluctuating over the next few years. The highest number of publications occurred in 2023, with 8, before dropping again to 2 in 2024.

This pattern reflects variations in research output, with more intense periods of academic activity in 2014, 2017-2018, and 2022-2023. The sharp increase in 2022 and 2023 could be attributed to heightened research interest or increased publication opportunities. Conversely, the years with lower publication counts, such as 2015, 2019, and 2024, may indicate less research activity or delays in publishing.

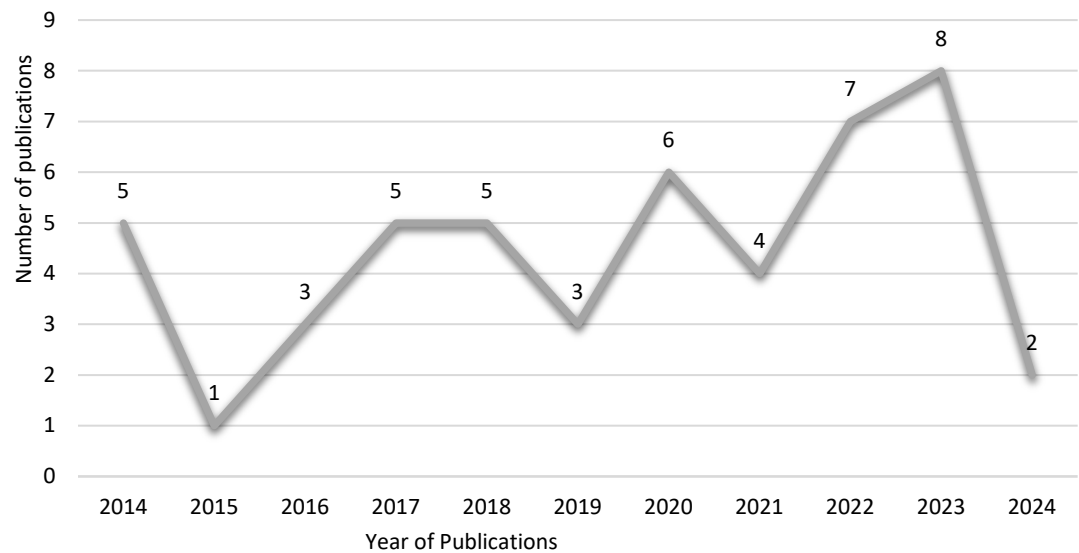


Figure 9. Number of Publications Per Year.

Figure 10 illustrates the number of publications by country, showing significant variation across the 21 countries listed. The highest number of publications is observed in Indonesia and Japan, with 10 and 9 publications, respectively. Malaysia and Kenya also show notable contributions, with 3 and 2 publications each. Other countries like Bangladesh, China, Croatia, Finland, Ghana, India, and others have 1 or fewer publications, indicating lower research output.

The graph also shows that some countries, such as the USA and Italy, have more moderate research contributions, with 2 and 3 publications, respectively. The “Various Countries” category accounts for 2 publications, indicating collaborative work or multi-country studies. This distribution suggests that research output is highly concentrated in a few countries, with Indonesia and Japan leading significantly, while other regions contribute less frequently. This uneven distribution may reflect differences in research funding, academic focus, or available resources across the countries shown.

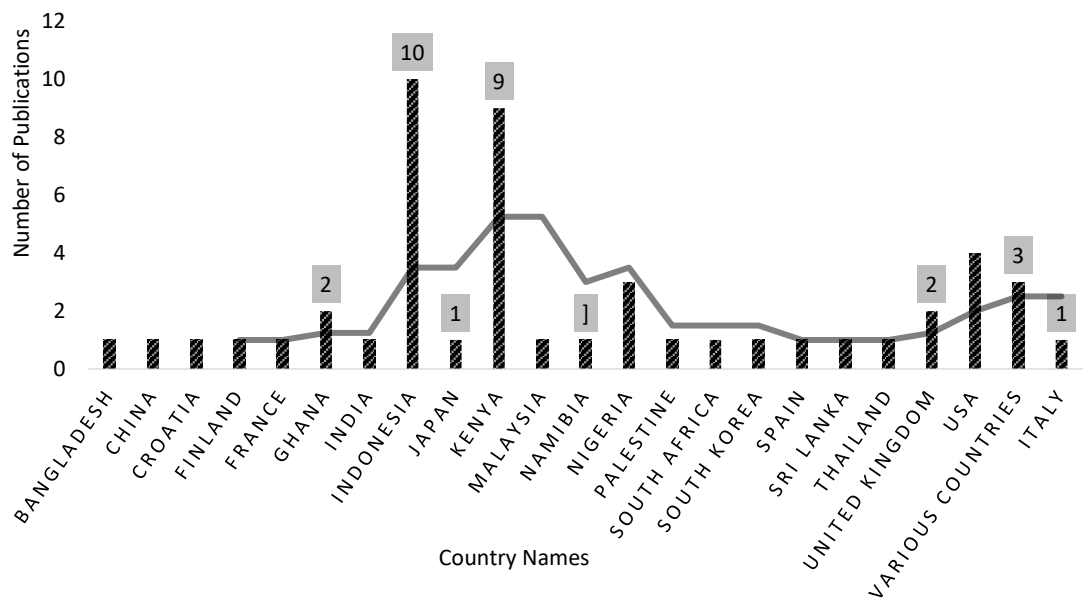


Figure 10. The Share of Research Publication by Country Based on The Study Context.

Table 8 presents a collection of research findings that analyze the relationship between Porter’s Five Forces and various aspects of business performance in SMEs across multiple sectors. It highlights how different competitive forces, such as the bargaining power of suppliers, industry rivalry, and the threat of new entrants, impact firm outcomes, including profitability, growth rate, market share, and employee experience. The table also outlines key contributions from the studies, showcasing strategies like digitalization, differentiation, and competitive innovation that enhance the performance and sustainability of SMEs.

Table 8. Summary of Competitive Forces, Strategic Responses, Organizational Outcomes, Business Performance, and Contribution.

Ref	Competitive Forces	Business Performance	Contribution
[36]	Bargaining power of suppliers	Firm performance, job creation, growth rate, profitability	The study found that digitalization significantly enhances SME performance, particularly in value-added growth and employment, within the EU27, especially during the COVID-19 pandemic.
[37]	Threat of new entrants	Firm performance, job creation	The study provides the effectiveness of various support programs and highlighting which interventions are most successful in improving SME performance
[38]	All Porter’s Five Forces	Employee experience, company recommendations	The study highlights that Porter’s Five Forces model helps managers in the telecommunication sector identify competitive strengths and weaknesses, with a call for further research to integrate additional factors influencing industry performance.
[39]	All Porter’s Five Forces	Employee experience, company recommendations	The study reveals that most SMEs in Medan are unaware of the Five Forces Analysis Model and its benefits, highlighting the need for academic support to help SMEs utilize the model to improve competitiveness.
[40]	All Porter’s Five Forces	Relationship with partners, Pricing strategy	The study combines the 9Ps of marketing mix with Porter’s Five Forces to formulate a competitive strategy for SME Gandhis Manes, recommending future research to include SWOT analysis for better strategy formulation.

[41]	All Porter's Five Forces	Employee experience, company recommendations	The paper highlights how SMEs can leverage their flexibility and focus on high-quality goods, particularly in Italy, to succeed in global markets by adapting to globalization trends and utilizing digitalization for competitive advantage.
[42]	Industry rivalry	Continuous excellence, industry leadership	The paper analyses Amazon's exceptional business and financial performance over the past three years, highlighting its superior growth, profitability, and strategic advantages compared to Walmart.
[43]	Bargaining of suppliers	Improved financial literacy, business sustainability	The paper concludes that financial literacy, socialization, and daily accounting systems are critical strategies for enhancing MSME sustainability and competitiveness.
[44]	All Porters five forces	Improved financial literacy, business sustainability	Highlights how value innovation complements traditional competitive strategies as outlined in Porter's Five Forces
[45]	All Porter's Five Forces	Employee experience, company recommendations	The paper highlights how digital marketing helps businesses target niche markets, build trust with customers, and grow their reach, but emphasizes the need for improved training and adaptation to platforms like Instagram and TikTok for future success.
[46]	All Porter's Five Forces	Sustainable Growth	This paper can serve as a foundational piece for understanding how Porter's Five Forces model applies to SMEs in different contexts, and it can offer practical insights for enhancing competitiveness in similar settings.
[47]	Industry rivalry	Market share, profitability, growth rate	The paper examines the structure, performance, and challenges of Namibia's fishery sector, emphasizing the need for balanced value addition, sustainable stock management, market diversification, and improved policy coordination.
[48]	All Porter's Five Forces	Market share, profitability, growth rate	The study finds that hardware SMEs in Imenti South Sub- County, Meru County, experience significant competitive rivalry and price sensitivity, but the threat of new entrants, bargaining power of buyers and suppliers, and threat of substitute products have limited impact on their competitiveness.
[49]	Industry rivalry	Market share achievement	Competitive strategies (cost, differentiation, and innovation) significantly improve SME performance in Yogyakarta, while alliance strategy and environmental dynamism do not, and competitive pressure negatively impacts performance.
[50]	All Porter's Five Forces	Competitive performance	In Kiambu County, SMEs effectively utilize Porter's generic strategies, particularly differentiation, which has the strongest positive impact on performance, confirming the strategic practices' link to superior performance.
[51]	All Porter's Five Forces	Enhanced competition and innovation	Implementing ergonomic service values (EISV) in SMEs enhances innovation and performance by improving service marketing, product values, and firm positioning, aligning with Porter's competitive advantage theory.
[52]	All Porter's Five Forces	Market Response, Managerial Understanding	The competency analysis of community-based tourism (CBT) using Porter's Five Forces revealed that market competition, the threat of new entrants, substitutes, and varying bargaining powers of suppliers and customers significantly impact the survival and growth of CBT SMEs, with capital and marketing strategy being crucial for competitive advantage.

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|------|---|--|--|
| [53] | Industry rivalry, Bargaining power of buyers | Market Response, Managerial Understanding | The study found that industry characteristics negatively affect firm performance while dynamic capabilities, such as sensing and seizing opportunities, positively impact performance, emphasizing the need for Croatian manufacturing SMEs to adapt and invest in these capabilities. |
| [54] | Porter's Five Forces, Inverted-U Relationship | Variability in innovation orientation by SME group and competition levels | The study empirically supports the inverted-U relationship between competition and innovation in public procurement, revealing that while low competition increases innovation, high competition decreases it, with variations across different SME groups. |
| [55] | All Porter's Five Forces | Competitive pressure, Technological development | The study finds that while IT and business strategies in Japanese SMEs are significantly influenced by primary value chain activities, the Porter's Five Forces model shows mixed effects on IT strategy, with only threat of new entrants and buyer power positively impacting it. |
| [56] | All Porter's Five Forces | High earnings, employment opportunities, improvement in infrastructure, service extension | The study finds that in Ghana's downstream oil and gas sector, SMEs' investment behaviour is influenced by the threat of entry, competitive rivalry, power of suppliers, and power of buyers, but not by the threat of substitutes, aligning with Porter's Five Forces model. |
| [57] | All Porter's Five Forces | Performance improvements, contribution to poverty alleviation | The study concludes that increased industry competition and higher entrepreneurial activity drive SMEs in Bali to implement differentiation strategies, which in turn improve performance and reduce poverty. |
| [58] | Industry rivalry | Competitiveness includes potential (internal capability, external environment, owner and company characteristics), process (operation and growth strategies), and performance (financial and non-financial). | The study outlines the dimensions of competitiveness in SMEs—potential, process, and performance—and provides recommendations for enhancing SME competitiveness through passion, innovation, growth strategies, and government support, while emphasizing the role of mediators in providing training and access to resources. |
| [59] | Industry rivalry | Enhanced business survival, Improved customer service | The paper identifies ten key issues for small business sustainability beyond five years, including finance, government policy, flexibility, and customer retention, and emphasizes the importance of understanding these challenges and developing strategies to enhance long-term survival. |
| [60] | Threat of new entry | Enhanced investment strategies, Improved participation in renewable energy sector | The paper develops a simplified "RBV-Plus 5" model integrating RBV theory and Porter's 5 Forces to explain SMEs' investment behaviour in Ghana's renewable energy sector, highlighting the significant influence of competitive resources and industry forces on investment decisions. |
| [61] | Threat of new entry | Enhanced competitive advantage, improved productivity | The study emphasizes that narrowing the gap between business and IT professionals is crucial for SMEs in Kenya to achieve positive growth, as knowledgeable staff and well-implemented business strategies and information systems significantly enhance firm performance. |

[62]	Industry Rivalry	Competitive Advantage, Enhanced Financial Performance	The study highlights how SME importers' use of dynamic capabilities, both generic and import-specific, enhances import strategy effectiveness, leading to competitive advantages in product differentiation and cost reduction, particularly in volatile global markets, thus improving financial performance.
[63]	Industry Rivalry	Positive correlation between innovation speed and competitiveness; Enhanced by local government roles	The study concludes that innovation speed, supported by local government initiatives, significantly enhances the competitiveness of food SMEs in Malang, leading to higher profitability and productivity in a highly competitive market with short product life cycles.
[64]	All Porter's Five Forces	Organizational Structure, Entrepreneurial Orientation	This study demonstrates that while SME dynamic capabilities positively impact non-financial performance in volatile environments, organizational inertia moderates this effect, weakening the relationship with both financial and non-financial outcomes.
[65]	Power of Buyers, Power of Suppliers, Threat of Rivalries	Improvement in firm performance based on strategy implementation	The study concludes that differentiation and focus strategies positively impact financial and market performance in the wooden furniture industry, while cost leadership strategy has no significant effect.
[66]	All Porter's Five Forces	Moderate Performance, High Industry Rivalry	The study highlights that Porter's Five Forces framework significantly affects the performance of telecommunication firms in Kenya, while also demonstrating that strategic imitation, when managed effectively, can provide a competitive edge and product differentiation in new market entries.
[67]	Industry rivalry	Superior performance through competitive imitation, Differentiation of new products, Successful mobilization of existing entry resources	This study demonstrates that competitive imitation, when strategically applied during new product development, can provide firms with a superior market edge and product differentiation, especially by leveraging existing resources and learning from competitors.
[68]	All Porter's Five Forces	Competitiveness, Productivity	This study highlights the importance of implementing Porter's five forces and generic strategies, such as cost leadership, product differentiation, and focus, to enhance the competitiveness of small and medium industries (SMIs) in Bali, contributing to economic growth and job creation.
[69]	All Porter's Five Forces	Employment generation, poverty reduction, local capacity building	The study concludes that the use of strategic planning tools, such as financial analysis, SWOT, PEST, and Porter's five forces, positively influences the performance of SMEs in Kenya, despite challenges like inadequate training and resistance to change.

The data analysis highlights how SMEs across different industries leverage Porter's Five Forces and strategic responses like differentiation, cost leadership, and focus strategies to enhance performance. Digital transformation, innovation, and financial literacy play key roles in improving competitiveness, productivity, and market success. Geographic and economic contexts influence the effectiveness of these strategies, with studies from regions like Kenya and Croatia showing unique competitive challenges. While the framework proves valuable, many SMEs require further support in adopting it effectively, with calls for future research to integrate additional strategic tools and approaches for sustained competitiveness.

3.3. Risk of Bias in Studies

Table 9 summarizes a systematic assessment of multiple studies based on three key quality criteria: selection, comparability, and quality of studies. These criteria are rated on a star-based scale, with selection ranging from 0-4 stars, comparability from 0-2 stars, and the quality of studies from 0-3 stars. The studies are also assigned a total number of stars, reflecting their overall quality, and categorized as either low, moderate, or high quality based on their total star ratings. The purpose of this classification is to evaluate the robustness and reliability of the studies, providing a clear indication of their methodological rigor.

It becomes evident that most studies are of high quality, as indicated by the dominance of 8-9 total stars in many cases. Studies like [27,37,42,45,71], which received 9 total stars, exhibit strong selection, comparability, and study quality, suggesting comprehensive and reliable methodologies. In contrast, a smaller subset of studies, such as [25,26,62,65], falls under the low-quality category, with 5 stars, indicating weaker study designs and possibly limited comparability. Moderate-quality studies, which received 6 or 7 stars, bridge the gap, suggesting satisfactory but less rigorous methodologies compared to high-quality studies.

3.4. Results of Individual Studies

Figure 11 Shows The Distribution of Organizational Outcomes Influenced by Porter’s Five Forces And Highlights Key Areas of Focus Within Existing Literature. competitiveness represents the largest portion, accounting for 34.69% of the total. This suggests that a significant number of studies emphasize how competitive positioning within an industry is a primary outcome when applying Porter’s Five Forces. SMEs prioritize strategies that enhance their ability to compete effectively, which may include differentiation, cost leadership, and market adaptation. The emphasis on competitiveness reflects the crucial role of maintaining a strategic edge in rapidly evolving markets.

Table 9. Classification of Studies by Selection, Comparability, and Overall Quality Rating.

Study ID	Selection (0-4 stars)	Comparability (0-2 stars)	Quality of Studies (0-3 stars)	Total Stars	Quality Rating
[25,26,62,65]	★★	★★	★	5	Low Quality
[22,28,29,34]	★★★		★★★	6	Moderate Quality
[23,32,47,56,63,64,73]	★★★	★	★★★	7	High Quality
[24,30,31,36,40,41,43,44]	★★★★	★	★★★	8	High Quality
[27,37–39,42,45,46,52–54,59,60,67,71]	★★★★	★★	★★★	9	High Quality

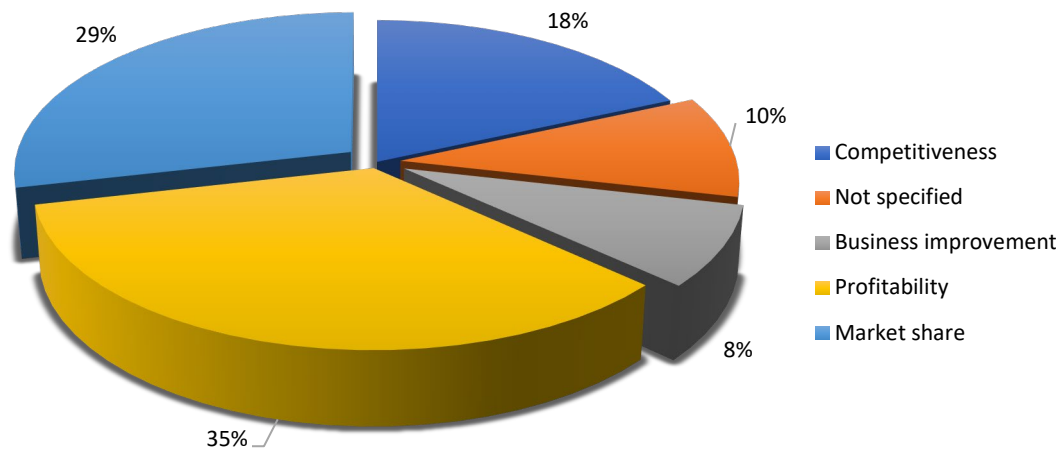


Figure 11. Business Performances.

Profitability follows closely, making up 28.57% of the distribution. This highlights the strong connection between the use of Porter’s Five Forces and financial performance. Studies in this area focus on how SMEs can improve their profitability by responding to competitive pressures, managing supplier relationships, and optimizing their market strategies. Profitability remains a key indicator of success for SMEs, particularly in sectors where competition is fierce and margins are tight. The focus on profitability underscores its importance as a measure of business sustainability and growth.

Market Share, accounting for 18.37%, also plays a significant role as an organizational outcome. The studies suggest that gaining or retaining market share is a critical objective for SMEs, often driven by competitive strategies derived from the analysis of industry forces. The focus on market share reflects the importance of expanding a firm’s presence and influence within its industry. By addressing the competitive forces, SMEs can adjust their strategies to capture a larger portion of the market, ensuring long-term viability and success.

A smaller portion, 10.20%, falls under the category of Not Specified, indicating that in some studies, outcomes were not clearly defined or were too broad to categorize. This could reflect gaps in the research or the need for more precise metrics when applying Porter’s model in various sectors. The Business Improvement accounts for 8.16% of the distribution, representing the smallest section. While improving operational and strategic performance is a core goal for most SMEs, fewer studies explicitly link Porter’s Five Forces to overall business improvement, focusing instead on specific areas such as competitiveness or profitability.

3.5. Results of Syntheses

3.5.1. Study Characteristics and Bias Assessment

Figure 12 highlights the distribution of research methodologies used in the reviewed studies. Out of the total reviewed papers, 13 utilized case studies, providing in-depth, contextual analysis of specific SMEs. Surveys were the most popular method, used in 23 studies, allowing for a broader and more quantitative examination of SMEs’ responses to competitive forces. Similarly, interviews, also employed in 13 studies, offered qualitative insights into the perceptions and experiences of SME leaders regarding their competitive environments.

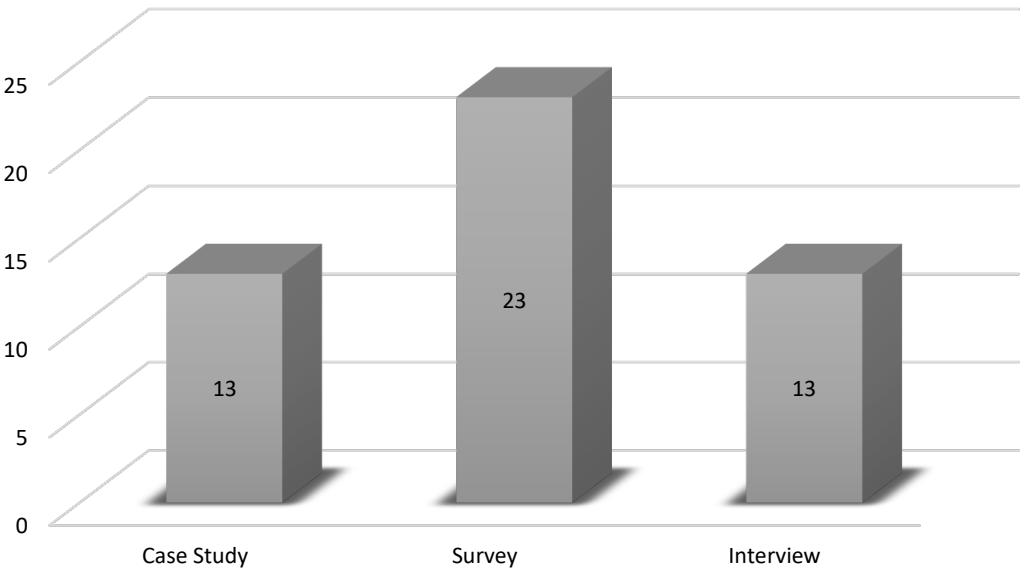


Figure 12. Distribution of Research Methodologies in the Systematic Review.

The prominence of survey-based research underscores the focus on obtaining quantifiable data to generalize the impact of Porter’s Five Forces across various SMEs. However, the balanced use of case studies and interviews suggests a continued interest in capturing more nuanced, real-world experiences alongside numerical data.

3.5.2. Statistical Synthesis Results

Figure 13 illustrates the distribution of three data analysis techniques used in research: Thematic Analysis, Structural Equation Modeling (SEM), and Statistical Analysis. Each technique is associated with a specific percentage that reflects its usage in the context of the study. Thematic Analysis shows the highest utilization, followed by SEM, while Statistical Analysis appears to be the least used method.

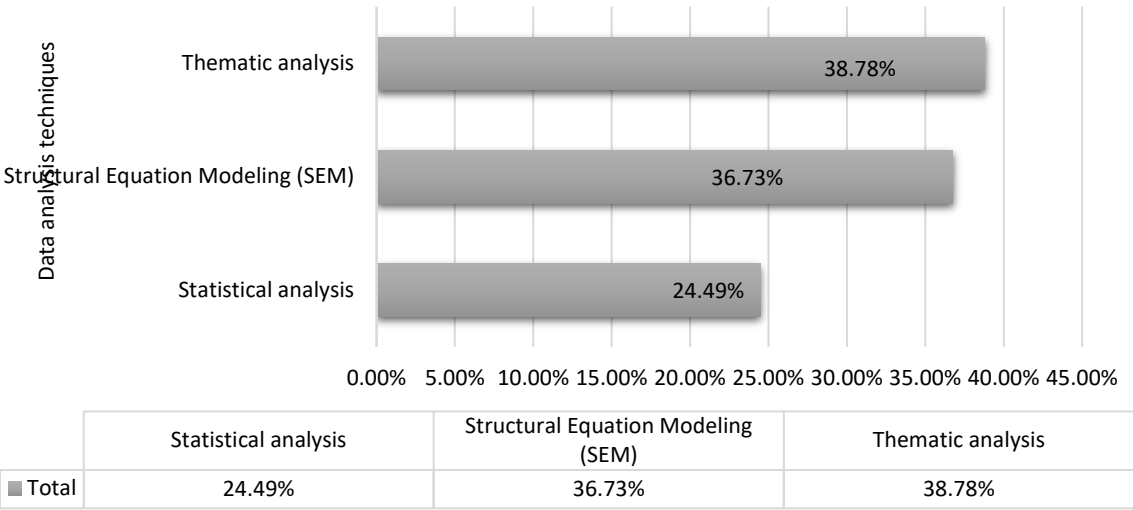


Figure 13. Data Analysis Techniques.

Thematic Analysis, representing 38.78% of the techniques used, highlights its importance in qualitative research, particularly in studies focused on identifying patterns and themes within data. SEM, with 36.73%, suggests a strong preference for modeling relationships between variables and testing hypotheses. Statistical Analysis, at 24.49%, reflects its role in providing numerical insights, though it is used less frequently compared to the other methods. This distribution suggests a balanced but qualitative-leaning approach in the research context.

3.6. Reporting Biases

Figure 13 provides a breakdown of the research methodologies used, categorized into three types: Quantitative, Qualitative, and Mixed-methods. The chart presents the relative usage percentages of each method, with Quantitative research having the largest share, followed by Qualitative, and Mixed-methods as the least employed approach.

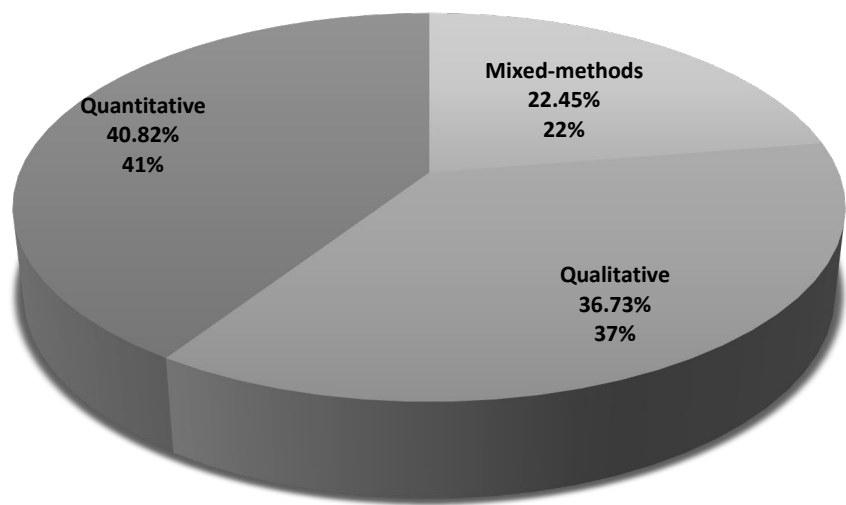


Figure 13. Type of Study.

Quantitative methods dominate the chart at 40.82%, emphasizing their importance in providing measurable and numerical data to support research findings. Qualitative methods follow closely at 36.73%, highlighting their role in exploring deeper, contextual insights. Mixed methods, combining both quantitative and qualitative approaches, account for 22.45%, reflecting the need for a balanced approach that integrates both data types in certain research scenarios. This distribution suggests a preference for quantitative research but also indicates a significant reliance on qualitative insights and mixed method approaches in research contexts.

3.7. Certainty of Evidence

According to the method used illustrated in Table 6 we conducted a certainty assessment which is shown on Table 10. This table provides a clear evaluation of the research quality of different studies on the impact of Poter’s five forces on SMEs. Most of the studies achieved high certainty, with several receiving 90% or higher, indicating strong and reliable findings. However, a few studies scored lower, highlighting potential limitations in data collection, analysis, or contribution to the field. These lower-scoring references should be interpreted with more caution as they may not provide as comprehensive or conclusive evidence as higher-scoring papers.

Table 10. Proposed Risk of Bias Assessment.

Ref.	QA1	QA2	QA3	QA4	QA5	Total	Percentage (%)
------	-----	-----	-----	-----	-----	-------	----------------

[23,24,27,29,36,37,42,44,47–49,52,54–56,59,60,66–70,72]	1	1	1	1	1	5	100
[22]	1	0.5	0	1	1	4.5	90
[25]	1	0.5	0	0	1	2.5	50
[26,28];	0.5	1	1	1	1	4.5	90
[30,32,50,57,58,61–64,71]	1	1	1	1	0.5	4.5	90
[31]	1	1	0.5	1	0.5	4	80
[33]	0.5	1	0.5	1	1	4	80
[34]	0.5	0.5	0	1	1	3	60
[38–40,43,45,46,53]	1	1	0.5	1	1	4.5	90
[41]	1	1	0	1	1	4	80
[50]	1	1	1	1	0.5	4.5	90
[51]	1	1	1	0.5	1	4.5	90
[65]	0.5	1	1	1	0.5	4	80

In terms of QA1 most studies received a score of 1, indicating that the research questions were clearly and explicitly stated across the majority of the papers. This shows that the studies were well-structured, with a clear focus on what they aimed to explore, particularly in relation to the impact of Porter’s Five Forces model on SMEs.

For QA2 a few studies, such as [25] and [34], scored lower. This indicates that these studies did not sufficiently detail their data collection methods, making it difficult for readers to assess the reliability and replicability of the research. Clear specification of data collection is crucial for ensuring transparency in the research process.

QA3 was a common area where some studies received lower scores, either 0.5 or 0. In particular, studies like [22] and [25] did not adequately describe their sampling techniques or had insufficient sample sizes. This raises concerns about the generalizability of their findings, as appropriate and clearly defined sampling methods are key to ensuring valid and reliable results.

QA4, most studies performed well, demonstrating that they utilized clear and appropriate research methodologies. Only a few studies presented partially developed or unclear methodologies, which impacted the overall contribution and clarity of their findings. A well-defined methodology is essential for guiding the research process and ensuring the rigor of the analysis.

QA5 showed a mix of results. While some studies contributed significantly to the existing literature, others, scoring 0.5 or 0, added less new insight. Studies with lower scores on this criterion may have lacked depth in their analysis or failed to provide meaningful advancements in understanding the role of Porter’s Five Forces model in SMEs.

4. Findings and Recommendations

4.1. Key Findings and Strategic Implications for Business Leaders

Understanding and effectively responding to the forces that shape the competitive environment is essential for business leaders in Small and Medium-Sized Enterprises (SMEs). Porter’s Five Forces model offers a framework to analyze competitive pressures, helping SMEs to develop strategies for growth, differentiation, cost leadership, and digital transformation. Table 9 outlines key findings and their strategic implications for SMEs, covering specific actions business leaders can take to address each force.

Table 9. Key Findings and Strategic Implications for Business Leaders.

Porter’s Five Forces	Key Findings	Subcategories	Strategic Drivers	Barriers	Opportunities	Strategic Implications for Business Leaders	Expected Outcomes
Industry Rivalry	SMEs utilizing differentiation	Product Differentiation	Focus on developing unique	High competition and	Unique offerings can enhance	Leaders should prioritize continuous	Increased market share,

Threat of New Entrants	on and innovation outperform competitors in competitive markets.		products/services that offer value to customers.	market saturation.	customer loyalty and market share.	innovation and differentiation to remain competitive in high-rivalry industries.	improved brand positioning.
		Service Innovation	Implement new customer service models or delivery channels to distinguish from competitors.	Limited resources for innovation.	Improved customer satisfaction and retention through superior service.	Invest in service innovations to meet evolving consumer needs and improve the customer experience.	Enhanced customer satisfaction, reduced churn.
		Competitive Pricing	Implement competitive pricing strategies to drive market penetration.	Cost constraints, price wars.	Attract new customers, increase sales volumes.	Leaders should balance pricing with value creation to avoid price wars that can erode profitability.	Sustainable sales growth, price elasticity.
	Cost leadership helps SMEs create jobs, improve performance, and maintain competitive pricing.	Cost Efficiency	Streamline operations to reduce costs and improve pricing strategies.	High capital requirements, economies of scale.	Low-cost models can act as entry barriers for new competitors.	Focus on cost optimization strategies to protect market share from new entrants.	Improved operational efficiency, lower costs.
		Barriers to Entry	Invest in proprietary technologies or exclusive partnerships to create barriers for new entrants.	Regulatory hurdles, high capital investments.	Exclusive relationships and proprietary technologies create defensible market positions.	Leaders should strengthen barriers through innovation, intellectual property, and strategic partnerships.	Reduced vulnerability to new competitors.
		Brand Loyalty	Enhance brand equity and customer loyalty to make it harder for new entrants to capture market share.	Difficulty in building brand identity.	Established brands have more control over market dynamics and customer retention.	Strengthen brand positioning through consistent quality and customer engagement.	Increased customer retention, lower acquisition costs.
Bargaining Power of Suppliers	Digital transformation enhances	Supply Chain Digitalization	Implement digital tools like ERP and SCM to	Resistance to change, high	Digital tools can streamline operations	Invest in digital supply chain solutions to reduce supplier	Streamlined operations, better

Bargaining Power of Buyers	SME performance by improving productivity and customer experience.		enhance supply chain visibility and efficiency.	implement automation costs.	and improve supplier relationships.	dependency and improve operational resilience.	supplier negotiations.
		Supplier Relationship Management	Develop strategic partnerships with key suppliers to secure favorable terms and reliable supply.	Supplier dominance in key sectors.	Strong partnerships can lead to better pricing and priority supply.	Foster long-term supplier relationships through collaborative strategies and joint ventures.	Improved supply chain resilience, cost savings.
	Financial literacy improves SME sustainability and competitive advantage by enabling better decision-making.	Financial Management	Strengthen financial literacy and management to enhance decision-making and profitability.	Lack of access to financial education.	Improved financial management helps in strategic pricing and negotiations with buyers.	Leaders should invest in financial literacy programs for their teams to enhance competitive positioning.	Stronger financial performance, optimized pricing strategies.
Threat of Substitutes		Customer Relationship Management	Implement AI-driven CRM systems to enhance customer engagement and predict buyer needs.	Complexity of implementing AI systems.	AI-driven insights can improve customer targeting and retention.	Invest in AI technologies to better understand customer preferences and drive loyalty.	Enhanced customer retention, personalized experiences.
	Differentiation and cost leadership improve market performance, especially in niche markets like Bali's SMEs.	Product Innovation	Focus on continuous product innovation to stay ahead of substitutes.	High cost of innovation.	Constant product improvements reduce the threat of substitutes.	Leaders should drive R&D efforts to maintain a competitive edge over substitutes.	Increased market share, continuous product lifecycle.
		Market Research	Conduct regular market research to stay informed of	Difficulty in tracking market changes in real-time.	Proactive responses to market shifts can reduce the	Establish a continuous market research system to monitor competitor	Early identification of market shifts, proactive

	emerging substitutes and market shifts.	impact of substitutes.	activities and substitute trends.	strategy adjustment.
Each of Porter's Five Forces presents both Strategic challenges and Opportunities Across Forces for SMEs, depending on the industry context.	Leaders must track specific metrics and KPIs to make data- driven decisions.	Resource limitations, fast- changing environme nts.	Data-driven strategies enable rapid responses to competitive pressures.	Implement KPIs for continuous improvement, focusing on areas such as cost efficiency, customer engagement, and innovation. Improve d agility, better decision- making, stronger market positioni ng.

For SMEs, the competitive forces outlined in Porter’s Five Forces framework offer both challenges and strategic opportunities. By understanding how to respond to these forces—whether through cost leadership, innovation, digital transformation, or financial literacy—business leaders can position their firms for sustained growth and competitiveness. The key to success lies in balancing these strategies with a data-driven approach, where tracking KPIs and responding to market signals in real-time will enable SMEs to outmaneuver competitors and capitalize on emerging opportunities. Leaders must continuously innovate, optimize, and align their business strategies with evolving market forces to ensure long-term profitability and resilience in an ever-changing business landscape.

4.2. Decision-Making Framework for Implementation

For SMEs to effectively compete and thrive in competitive markets, strategic decisions must account for the dynamics of Porter’s Five Forces—Industry Rivalry, Threat of New Entrants, Bargaining Power of Suppliers, Bargaining Power of Buyers, and Threat of Substitutes. As shown in Table 10, this section provides a comprehensive decision-making framework for SME leaders, grounded in the systematic review of the forces shaping SME performance and how technology plays a role in countering these.

Table 10. Proposed Decision-Making Framework for Implementation.

Porter's Force	Key Decision Points	Sub- Decision Points	Technologi es to Implement	Evaluation Metrics	Risks to Consider	Strategic Benefits	Long-term Implications
Industry Rivalry	Differentiati on vs. Cost Leadership	Should SMEs prioritize innovation and differentiati on or reduce costs to stay competitive ?	AI-driven product customizati on, digital marketing platforms, ERP systems for cost optimizatio n.	Customer engagemen t, cost-per- unit, market share.	High cost of technology adoption, risk of overspending on innovation.	Differentiati on builds customer loyalty, while cost leadership reduces operational expenses.	Enhanced competitive edge, sustained market position.
		Product Innovation	Should the focus be on innovating	Cloud- based R&D systems for	Product developme nt time,	Risk of focusing too much on one	Product innovation meets Higher profitability and long-

Threat of New Entrants	vs. Process Innovation	products or optimizing business processes?	product innovation, AI for process automation	process efficiency, time-to-market.	area, neglecting other business operations.	evolving customer needs; process optimization increases efficiency.	term competitiveness.
	Cost Leadership vs. Barriers to Entry	Should SMEs focus on building cost leadership or strengthening barriers to entry through innovation?	AI-driven process automation, blockchain for secure transactions, IoT-based operational efficiency.	Production costs, market entry rates, customer acquisition cost (CAC).	High initial investments in automation and technology.	Cost leadership and innovation discourage new entrants.	Market position security, increased efficiency, lower customer churn.
	Pricing Strategy vs. Differentiation	Should SMEs focus on lowering prices or differentiating their products to maintain market share?	Dynamic pricing algorithms, CRM systems for personalized marketing.	Pricing elasticity, customer retention rate, sales growth.	Price wars can erode margins if not managed effectively.	Differentiation strengthens brand loyalty while dynamic pricing optimizes revenue streams.	Reduced threat from new competitors, increased customer loyalty.
	Bargaining Power of Suppliers	Supply Chain Digitization vs. Supplier Diversification	Should SMEs digitize supply chains or diversify suppliers to reduce supplier power?	AI-driven supply chain management, blockchain for supplier transparency.	Supplier concentration, supply chain efficiency, procurement costs.	Supply chain disruptions, high cost of digitization.	Digital supply chains reduce dependency and increase transparency.
Bargaining Power of Buyers	Long-term Contracts vs. Flexible Supplier Relationships	Should SMEs lock in long-term contracts with suppliers or maintain flexible relationships?	Contract management software, ERP systems for supplier management.	Supplier switching costs, contract performance, supplier dependency.	Risk of inflexible contracts that limit responsiveness to market changes.	Long-term contracts ensure price stability, flexible relationships allow for adaptability.	Enhanced supplier relationships and supply chain resilience.
	Value Creation vs. Price Sensitivity	Should SMEs focus on creating more value or managing	AI-powered CRM for personalized customer experiences, cloud-	Customer satisfaction scores (CSAT), repeat purchase rates,	Over-reliance on a few large buyers can lead to price pressures.	Value creation through innovation strengthens customer loyalty and	Increased customer lifetime value, reduced reliance on price cuts.

Threat of Substitutes	buyer price sensitivity?		based data analytics for market research.	average order value (AOV).	mitigates buyer power.	
	Customization vs. Standardization	Should SMEs offer highly customized solutions or standardized offerings to appeal to a broader audience?	AI-driven product customization on platforms, ERP for standardized product offerings.	Customization lead times, customer satisfaction, operational efficiency.	Risk of overcomplicating operations with too much customization.	Customization increases customer satisfaction, while standardization reduces costs.
	Product Development vs. Market Penetration	Should SMEs invest in developing new products or increase market penetration for existing offerings?	AI-driven market research for product development, digital marketing for market expansion.	Rate of product substitution, market share growth, innovation rate.	High R&D costs can reduce short-term profitability.	Product development reduces the threat of substitutes; market penetration increases brand visibility.
	Niche Markets vs. Broad Market Focus	Should SMEs target niche markets to avoid substitutes or expand offerings for a broad market appeal?	AI-powered customer segmentation, data analytics for market targeting.	Market share in niche markets, customer acquisition cost (CAC), product uniqueness.	Focusing too much on niche markets may limit growth potential.	Niche markets reduce exposure to substitute products.
						Greater customer loyalty in niche markets, higher profitability in targeted segments.

The decision-making framework provides a structured approach for SMEs to navigate Porter’s Five Forces and effectively implement digital technologies that strengthen their competitive positioning. Each force presents unique challenges and opportunities, which can be addressed by adopting technologies such as AI, IoT, and blockchain. By strategically evaluating key decision points and considering long-term implications, SMEs can develop resilient business strategies that mitigate threats, capitalize on opportunities, and secure sustainable competitive advantage in their industries.

4.3. Best Practices for Successful Implementation of Porter’s Five Forces in SMEs

Introduction Implementing Porter’s Five Forces in SMEs requires strategic alignment, practical tools, and industry-specific customization to navigate the competitive landscape effectively. Success is contingent on not only understanding the framework but also translating it into actionable strategies that enhance competitive advantage, operational efficiency, and market positioning. As shown in Table 11, this section introduces the proposed best practices for implementing Porter’s Five Forces, grounded in the key findings from our proposed review and offers practical insights for business leaders in SMEs to deploy these strategies effectively.

Table 11. Best Practices for Successful Implementation of Porter’s Five Forces in SMEs.

Best Practice	Description	Strategic Rationale	Technologies /Tools to Support Implementation	Expected Outcomes	Challenges	Recommendations
Comprehensive Industry Analysis	Conduct detailed market and industry research to identify key players (competitors, suppliers, buyers).	Helps SMEs understand their competitive landscape and identify areas of opportunity or threat.	Market analysis tools, competitor analysis platforms (e.g., SEMrush, SWOT analysis tools).	Clear understanding of competitive dynamics, identification of threats/opportunities.	High cost and time involved in detailed analysis.	Use automated market analysis tools to streamline research and ensure accuracy.
Strategic Differentiation	Focus on product differentiation to stand out in highly competitive markets (Industry Rivalry). Use cost leadership and innovation to create barriers that deter new entrants (Threat of New Entrants). Develop strong relationships with suppliers or diversify supplier base to reduce dependence (Bargaining Power of Suppliers). Collect and analyze customer data to better understand buyer needs and reduce buyer power (Bargaining Power of Buyers).	Differentiation helps SMEs avoid price wars and compete on quality and innovation rather than cost.	AI-driven product customization, customer feedback platforms for continuous improvement.	Increased customer loyalty, improved market share.	Difficulty in maintaining innovation pace, high R&D costs.	Regularly collect customer feedback and invest in incremental innovations.
Building Barriers to Entry	Use cost leadership and innovation to create barriers that deter new entrants (Threat of New Entrants). Develop strong relationships with suppliers or diversify supplier base to reduce dependence (Bargaining Power of Suppliers). Collect and analyze customer data to better understand buyer needs and reduce buyer power (Bargaining Power of Buyers).	Establishes a competitive edge by lowering costs and offering innovative products.	Automation tools, cloud computing, IoT for operational efficiency, blockchain for security.	Reduced risk of new competitors, sustained market position.	Significant upfront investments in technology.	Focus on scalable technologies that provide long-term savings.
Supplier Relationship Management	Develop strong relationships with suppliers or diversify supplier base to reduce dependence (Bargaining Power of Suppliers). Collect and analyze customer data to better understand buyer needs and reduce buyer power (Bargaining Power of Buyers).	Helps SMEs secure better pricing and terms, reducing supplier leverage.	Supply chain management platforms, blockchain for supplier transparency, AI for demand forecasting.	Lower procurement costs, enhanced supply chain resilience.	Resistance from suppliers, cost of integrating technology with suppliers.	Use digital contracts and negotiation tools to streamline supplier relationships.
Leverage Buyer Insights	Collect and analyze customer data to better understand buyer needs and reduce buyer power (Bargaining Power of Buyers).	Data-driven insights allow SMEs to anticipate buyer demands and adjust pricing or offerings.	AI-powered CRM systems, customer feedback platforms, cloud-based data analytics.	Improved customer satisfaction, higher customer retention.	High cost of data analytics tools, customer data privacy concerns.	Ensure compliance with data privacy regulations and invest in secure data collection methods.

Innovation and Product Development	Focus on continuous product innovation to combat the threat of substitutes (Threat of Substitutes). Target niche markets with specialized products to reduce exposure to intense competition and substitutes. Invest in financial literacy to improve decision-making and sustainability, particularly in negotiating with buyers (Bargaining Power of Buyers). Use technology to reduce operational costs and achieve cost leadership in industries with intense rivalry (Industry Rivalry). Encourage continuous innovation across the organization to keep up with changing market demands and competitive pressures (Industry Rivalry,	Innovation helps SMEs stay ahead of market trends and substitute products. Niche markets allow SMEs to dominate smaller segments and reduce direct competition. Informed financial decisions help SMEs manage pricing, cost structures, and profitability. Automation and efficiency improvements help SMEs reduce costs without sacrificing quality. A culture of innovation ensures SMEs remain adaptive and forward-thinking.	AI-driven R&D platforms, IoT for smart product development, digital market research tools. Customer segmentation tools, AI for targeting niche demographics. Financial management software, ERP systems for budget tracking, business intelligence tools. AI for process automation, ERP systems for cost control, IoT for monitoring efficiency. Innovation management platforms, cloud collaboration tools, AI-driven idea generation tools.	New revenue streams, reduced impact of substitute products. Higher profitability in niche markets, stronger brand loyalty. Better financial health, improved negotiation power with buyers. Reduced operational costs, higher profit margins. Long-term sustainability, market leadership in product innovation.	High R&D costs, fast-changing market trends. Limited market size, risk of market saturation. Lack of financial expertise within SME leadership. Initial technology costs, resistance to change from staff. Risk of innovation not aligning with market demands.	Implement agile product development strategies to reduce time-to-market. Balance niche market strategies with broader market expansion plans. Provide regular financial training for leadership teams. Gradually implement technology to manage transition costs and change management. Conduct regular market research to ensure innovations meet customer needs.
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Adaptability to External Market Forces	Threat of Substitutes). SMEs must remain flexible and adaptable to external forces such as regulatory changes, economic shifts, and technological advancement s.	Adaptability allows SMEs to pivot strategies in response to external pressures.	Business intelligence platforms, predictive analytics tools.	Resilience to market changes, reduced risk of business disruptions.	Difficulty in staying ahead of rapidly changing market forces.	Develop contingency plans and invest in tools for market forecasting.

Implementing Porter’s Five Forces successfully within SMEs requires a balance between strategy, innovation, and operational efficiency. This table outlines the key best practices that SMEs can adopt to counter competitive pressures while leveraging digital tools for sustainable growth. By following these best practices, SMEs can enhance their competitiveness, build stronger relationships with stakeholders, and position themselves for long-term success in their respective industries. The use of technology such as AI, IoT, and blockchain is integral to modernizing SME operations, reducing costs, and ensuring that they remain adaptable in dynamic markets.

4.4. Metrics and KPIs for Measuring Performance

To effectively measure the performance of SMEs in navigating the competitive dynamics outlined by Porter’s Five Forces, specific metrics, and Key Performance Indicators (KPIs) must be implemented. These provide critical insights into how SMEs are managing the forces of industry rivalry, threats from new entrants and substitutes, bargaining power of suppliers and buyers, and the overall sustainability of their competitive position. As shown in Table 12, this section provides a detailed breakdown of metrics and KPIs tied to each of the Five Forces, providing actionable insights for tracking and improving SME performance.

Table 12. Metrics and KPIs for Measuring Porter’s Five Forces.

Porter’s Five Forces	Metrics/KPIs	Description	Strategic Insights	Challenges	Recommendations
Industry Rivalry	Market Share	Percentage of total industry sales captured by the SME.	Indicates competitive positioning and market dominance. Growing market share signals successful competition, while a declining share indicates competitive threats.	High competition can make it difficult to increase market share.	Invest in differentiation and innovation strategies to stand out.
	Customer Retention Rate	Percentage of repeat customers over time.	Tracks customer loyalty and satisfaction. Higher retention suggests customer	Difficult to retain customers in saturated markets.	Develop personalized customer engagement strategies and loyalty programs.

	Sales Growth Rate		Percentage change in sales over a period.	satisfaction and lower susceptibility to competition. Measures how well SMEs are responding to competitive pressures. Consistent growth indicates a strong market position.	Growth can stagnate in highly competitive markets.	Focus on product innovation and market expansion strategies.
	Competitive Pricing Index		Price comparison between the SME and its competitors.	Assesses whether the SME's pricing strategy is competitive or at risk of being undercut by rivals.	Pricing wars can erode profit margins.	Maintain a balance between cost leadership and value differentiation.
	Threat of New Entrants	Number of New Competitors	Count of new competitors entering the market.	Helps SMEs assess how many new competitors are threatening their market share.	Markets with low entry barriers will attract more competitors.	Strengthen entry barriers through technology, brand loyalty, and unique offerings.
		Barriers to Entry Strength	Measures the effectiveness of barriers such as capital requirements, regulatory compliance, or proprietary technology.	High barriers protect against new competitors entering the market.	Technological advancements can lower traditional entry barriers.	Innovate to maintain a cost advantage and continuously build brand loyalty.
		Customer Acquisition Cost (CAC)	Cost associated with gaining a new customer.	Higher CAC indicates difficulty in attracting new customers, possibly due to increased competition.	Rising CAC could signal inefficiency or ineffective marketing strategies.	Use digital marketing strategies and optimize customer journey to reduce CAC.
	Bargaining Power of Suppliers	Supplier Diversity Index	Number and variety of suppliers the SME relies on.	Greater diversity reduces supplier leverage and allows for better negotiation terms.	Over-reliance on a few suppliers can lead to increased bargaining power and costs.	Expand supplier base to include more diverse and competitive sources.
		Cost of Goods Sold (COGS)	Direct costs attributed to the production of goods sold by the SME.	Increasing COGS suggests greater supplier power or inefficiency.	Rising supplier costs can erode margins.	Negotiate better terms with suppliers or find alternative suppliers to control COGS.

Bargaining Power of Buyers	Inventory Turnover Ratio	Number of times inventory is sold and replaced over a period.	High turnover indicates efficient supply chain management, while low turnover could signal supplier inefficiencies or poor demand forecasting. High CSAT suggests that buyers are satisfied and less likely to exert pressure on pricing or product offerings.	Supplier delays or inefficiencies can affect turnover.	Implement real-time inventory management systems to improve turnover.
	Customer Satisfaction Score (CSAT)	Measures customer satisfaction based on feedback surveys.	Higher AOV suggests less price sensitivity, allowing SMEs to capture greater value from each transaction.	Low satisfaction increases buyer leverage.	Continuously gather customer feedback to improve product and service offerings.
	Average Order Value (AOV)	The average amount spent per customer per transaction.	High NPS indicates strong brand loyalty and reduced buyer power.	Low AOV may indicate buyers are more price-conscious.	Bundle products or offer value-added services to increase AOV.
	Net Promoter Score (NPS)	Measures customer loyalty and likelihood of recommending the SME to others.	A high rate of substitution indicates competitors are offering better or cheaper alternatives.	Low NPS signals buyer dissatisfaction and vulnerability to substitutes.	Implement customer loyalty programs and enhance customer experience.
Threat of Substitutes	Rate of Product Substitution	Percentage of customers switching to substitute products.	A higher innovation rate indicates that the SME is actively mitigating the threat of substitutes by offering novel solutions.	Increasing substitution rates can erode market share.	Invest in continuous product innovation and differentiation to reduce substitution risk.
	Innovation Rate	Frequency of new product introductions or improvements.	Higher switching costs create barriers to substitution and increase customer loyalty.	Slow innovation can lead to product obsolescence.	Maintain an agile product development strategy and foster a culture of innovation.
	Customer Switching Costs	Costs incurred by customers when switching to a substitute product.	Low switching costs make it easier for customers to move to competitors.		Enhance product ecosystems and offer bundled services to increase switching costs.
Overall Performance	Profit Margins	Measures how much profit is made relative to revenue.	Indicates overall financial health and the SME's ability to manage inefficiencies or	Decreasing margins may indicate	Focus on operational efficiency, pricing strategies, and cost control.

Return on Investment (ROI)	Measures the profitability of investments in strategies, products, or technology.	competitive pressures. Higher ROI suggests that resources are being used effectively to combat competitive forces.	strong competition.	Regularly evaluate investment strategies and reallocate resources to high-impact areas.
			Low ROI may indicate poor investment decisions.	
Market Penetration Rate	Percentage of target market captured by the SME.	A high penetration rate signals strong competitive positioning.	Low penetration may indicate weak market strategy or strong competition.	Reassess marketing and sales strategies to improve penetration.

This table presents a comprehensive framework for SMEs to measure their performance in managing Porter’s Five Forces. Each metric and KPI is tied directly to the competitive forces shaping the business environment, providing actionable insights for tracking and adjusting strategies. By continuously monitoring these metrics, SMEs can better align their strategic actions with market realities, ensuring they remain competitive, innovative, and financially sustainable.

4.5. How Porter’s Five Forces Shape Competitive Dynamics for SMEs in Various Sectors

As shown in Table 13, the impact of Porter’s Five Forces on different industries varies depending on the specific competitive dynamics and market conditions that SMEs operate within. Understanding these nuances allows business leaders to adopt more tailored strategies, ensuring their firms can effectively respond to industry-specific challenges. This section uses the Five Forces framework to evaluate how competitive forces, including industry rivalry, the threat of new entrants, the bargaining power of suppliers and buyers, and the threat of substitutes, affect various industries. By analyzing these forces in key sectors such as telecommunication, retail, manufacturing, tourism, and more, SMEs can craft informed strategies that enhance their competitiveness, drive performance, and ensure sustainability in their respective industries.

Table 13. Comparative Analysis of Porter’s Five Forces Impact on Different SME Industries.

Industry	Bargaining Power of Suppliers and Buyers					Threat of Substitutes	Key Strategic Insights
	Industry Rivalry	Threat of New Entrants	Supplier Power	Bargaining Power of Buyers			
Telecommunication	High	Moderate	Moderate	High	Low		SMEs must innovate in service delivery and adopt cost leadership to manage high competition. Strategic investment in digital platforms is essential.
Manufacturing	Moderate	Low	High	Moderate	Low		Supplier power requires strong supply chain management. Focus on product quality and operational efficiency to differentiate.
Retail	High	Moderate	Moderate	High	Moderate		Competitive pricing and customer retention are critical. Omnichannel retail strategies improve customer engagement.

Tourism	Moderate	High	Moderate	High	Moderate	Focus on customer service, personalized experiences, and niche markets to mitigate buyer power and new entrants.
Fishing Industry	High	Moderate	High	Moderate	Low	Supplier dependence on raw materials (fish stocks) necessitates efficient supply chain management and sustainability practices.
Renewable Energy	Moderate	High	Moderate	Moderate	Low	Innovating in energy technologies is critical. Policy and government support can mitigate new entrants.
Wooden Furniture	Moderate	Low	High	Moderate	Low	Focus on high-quality, customized products. Manage supplier costs and relationships to maintain competitiveness.
Healthcare	Low	Low	High	Moderate	Low	Strong supplier relationships are crucial. Differentiation through specialized services helps mitigate rivalry.
Food and Beverage	High	Moderate	High	High	High	Managing supplier and buyer power through cost control and product differentiation is essential for success.
Tech Startups	High	High	Low	High	Moderate	Continuous innovation and capturing early adopters are key to thriving in a fast-paced, low-supplier-power environment.
Logistics & Transport	High	Low	Moderate	High	Low	Investment in digital fleet management and cost-efficient operations is critical in a high-rivalry, high-buyer-power industry.

The comparative analysis of Porter’s Five Forces across various industries reveals that each sector faces distinct competitive dynamics that require tailored strategies for SMEs. In high-rivalry industries like telecommunications, retail, and tech start-ups, innovation, digital transformation, and omnichannel strategies are critical to remaining competitive. Industries such as manufacturing, healthcare, and fishing face significant supplier power, necessitating strong supplier relationship management and operational efficiency. Sectors like tourism and renewable energy benefit from moderate rivalry but face high entry threats, making niche market development and innovation essential for maintaining a competitive edge. Finally, industries with strong buyer and supplier power, such as food and beverage, must focus on product differentiation and cost management to thrive.

4.6. Real Case Studies and How They Relate to Proposed Systematic Review

This section presents case studies across various industries that have applied Porter’s Five Forces Model to understand competitive dynamics and improve their market positioning. Each case highlights the forces most relevant to the industry and the outcomes of implementing strategies based on these competitive pressures. By summarizing these case studies as shown in Table 12, this review ties the empirical findings to the broader theoretical implications discussed in the systematic review.

Table 12. Summary of Case Studies Applying Porter’s Five Forces Model.

Case Study	Industry	Application of Porter’s Five Forces	Strategic Improvements	Challenges & Impacts
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[28]	Manufacturing	Applied Porter’s Five Forces alongside the 9Ps of marketing mix to assess competition, pricing strategies, and distribution.	Enhanced competitiveness, improved market strategies, stronger supplier relationships, and expanded distribution channels.	Overcame price pressures through enhanced distribution but faced challenges with balancing warranty costs and competitive pricing strategies.
[68]	Retail & Manufacturing	Evaluated supplier power through supplier relationships’ impact on cost and quality. Assessed buyer power based on bargaining strength.	Strong supplier relationships reduced cost pressures and improved product quality.	High buyer power meant pricing was heavily influenced by buyers, demanding stringent quality controls and negotiations to maintain profitability.
[74]	Manufacturing	Intense rivalry, focusing on low-cost strategies and reactive marketing practices.	Managed to maintain market share with low-cost strategies.	Marketing practices were reactive, limiting the firm’s ability to innovate, and creating a dependency on low-cost strategies that restricted growth opportunities.
[75]	Culinary Industry	High competition among existing firms, necessitating product differentiation.	Differentiation in product presentation and services like delivery increased brand uniqueness.	Faced high pressure from competitors with similar offerings, forcing the firm to continuously adapt its services to maintain a competitive edge.
[76]	Food Manufacturing	Assessed buyer power based on strength in price negotiation. Evaluated threat of substitutes impacting pricing and competition.	Buyer power drove consistent improvements in quality and forced price competitiveness.	Threat from substitutes increased, requiring ongoing innovation in product offerings and pricing strategies to avoid loss of market share to alternatives.
[77]	Medical Equipment	Analyzed competitive environment; Five Forces were indirectly applied. Focused on market dynamics and competitive pressures.	Improved performance through frequent innovation and business model redesigns.	Constant market shifts required continuous adaptation, challenging the company to stay ahead in terms of product development and technology integration.
[78]	Clothing Industry	Buyer bargaining power increased due to the rise of online platforms, impacting pricing.	Shift toward e-commerce platforms improved sales reach and online presence.	Sales declined from 2017-2019 due to technological advancements and intense online competition, requiring a realignment of marketing and sales strategies.
[79]	Ceramic Manufacturing	Analyzed competitive forces, focusing on buyer and supplier power and industry trends.	Strengthened supplier negotiations and improved product variety to meet market trends.	Faced high pressure from buyers demanding cheaper, colorful products. Innovation was driven by the need to reduce costs and address short product lifecycles.

The real-world case studies examined across various industries reinforce the critical role of Porter’s Five Forces Model in shaping competitive strategy. In industries such as manufacturing, food

production, and retail, supplier and buyer power emerge as significant factors influencing pricing, cost structures, and product quality. The threat of substitutes, particularly in industries like food and ceramics, highlights the need for continuous innovation to remain competitive. Differentiation strategies, as seen in the culinary and clothing industries, are vital for firms operating in highly competitive markets. Finally, industries like medical equipment illustrate how innovation and strategic business model adjustments in response to competitive dynamics sustain long-term performance.

4.7. Roadmap for SMEs Businesses and Policy Recommendations

As shown in Table 13, to support the strategic growth and sustainability of SMEs across different industries, implementing Porter’s Five Forces model through a structured roadmap provides critical insights. This roadmap addresses industry-specific competitive dynamics and integrates targeted policies to help SMEs achieve a competitive advantage. By combining the forces with tailored recommendations, this comprehensive table allows business leaders to strategize, implement, and evaluate their business models effectively across different industries.

Table 13. Proposed Industry-Based Roadmap for Implementing Porter’s Five Forces.

Industry	Competitive Force	Roadmap Stage	Subcategories	Strategic Implications
Telecommunications	Industry Rivalry	Assessment	Market saturation, technological advancements	SMEs in this industry must differentiate through innovation and adopt digital platforms to manage high competition. Invest in advanced technologies and
	Threat of New Entrants	Strategy Development	Capital requirements, regulatory barriers	develop unique service models to maintain a competitive edge against new market entrants.
	Bargaining Power of Suppliers	Planning	Dependence on key suppliers, digital infrastructure	Prioritize building relationships with multiple suppliers and reduce dependency on high-power providers. Develop personalized
	Bargaining Power of Buyers	Implementation	Price sensitivity, contract lengths	services and flexible pricing to retain customers in the face of high buyer power. Continuously innovate
	Threat of Substitutes	Monitoring	Switching costs, availability of alternative technologies	service offerings to reduce the threat of substitutes in the digital and communication services sector.
Retail	Industry Rivalry	Assessment	High competition, market trends,	Constantly update product lines and enhance customer

Manufacturing	Threat of New Entrants	Strategy Development	customer loyalty Low barriers to entry, online retail expansion	experience to stay ahead of rivals. Utilize brand differentiation and develop omnichannel strategies to outperform new entrants in both physical and online markets.
	Bargaining Power of Suppliers	Planning	Supplier diversity, bulk purchasing	Negotiate long-term contracts and optimize supply chain management to reduce supplier power.
	Bargaining Power of Buyers	Implementation	Customer satisfaction, price sensitivity	Use data analytics to understand buyer preferences and offer competitive pricing or loyalty programs to mitigate buyer power.
	Threat of Substitutes	Monitoring	Availability of alternative products, shifting consumer trends	Foster product innovation and invest in customer engagement to minimize the risk of substitute products overtaking market share.
	Industry Rivalry	Assessment	Cost structures, production efficiency	Focus on operational excellence and cost leadership to maintain competitiveness in a high-rivalry market.
	Threat of New Entrants	Strategy Development	High capital investment, specialized machinery	Leverage economies of scale and patents to create significant entry barriers for new competitors.
	Bargaining Power of Suppliers	Planning	Raw material dependency, logistical challenges	Diversify supplier base and develop strong contractual terms to limit supplier power.
	Bargaining Power of Buyers	Implementation	Customization demands, bulk orders	Offer customizable solutions or bulk pricing options to balance buyer power and ensure profitability.
	Threat of Substitutes	Monitoring	Innovations in product alternatives	Stay updated with industry innovations and continuously

Healthcare	Industry Rivalry	Assessment	Regulatory changes, healthcare demand	improve product quality to reduce the appeal of substitute products. Differentiate through service quality and technological integration to remain competitive in a highly regulated environment.
	Threat of New Entrants	Strategy Development	Healthcare standards, entry regulations	Innovate patient care technologies and adhere to stringent regulations to build competitive barriers for new entrants.
	Bargaining Power of Suppliers	Planning	Supplier concentration, critical medical equipment supplies	Develop partnerships with multiple suppliers and engage in long-term contracts to minimize the risk of supply chain disruptions.
	Bargaining Power of Buyers	Implementation	Patient service quality, price sensitivity	Enhance the patient experience and offer diverse payment structures to cater to buyer expectations and reduce buyer power.
	Threat of Substitutes	Monitoring	Technological advancements in treatment alternatives	Continuously invest in R&D and treatment innovation to stay ahead of emerging substitute technologies.
Tourism	Industry Rivalry	Assessment	Seasonal demand fluctuations, customer experiences	Improve customer service, differentiate offerings, and leverage local experiences to stand out in a crowded market.
	Threat of New Entrants	Strategy Development	Low capital requirements, increased tourism demand	Establish niche tourism services or exclusive travel experiences to reduce the impact of new entrants.
	Bargaining Power of Suppliers	Planning	Hospitality industry supply chains, service costs	Build strong partnerships with local suppliers and use exclusive contracts to manage costs effectively.

Fishing Industry	Bargaining Power of Buyers	Implementation	Customer loyalty, pricing expectations	Offer tailored vacation packages and experiences to increase customer loyalty and mitigate the power of price-sensitive buyers. Continuously enhance service quality and explore new tourism niches to reduce the impact of substitutes like Airbnb or low-cost travel agencies.
	Threat of Substitutes	Monitoring	Alternative travel services, online travel agencies	Implement sustainable fishing practices and environmentally-friendly operations to gain a competitive advantage.
	Industry Rivalry	Assessment	Fish stock depletion, environmental regulations	Create entry barriers through sustainability certifications and proprietary technology.
	Threat of New Entrants	Strategy Development	Sustainability barriers, high equipment costs	Diversify sourcing and build long-term relationships with suppliers to manage costs effectively.
	Bargaining Power of Suppliers	Planning	Fishing gear suppliers, licensing	Promote sustainable fishing to attract environmentally-conscious buyers and establish premium pricing.
	Bargaining Power of Buyers	Implementation	Buyer preference for sustainability, price elasticity	Innovate within product lines (e.g., new seafood products) to stay ahead of emerging substitutes like plant-based seafood alternatives or farmed fish.
	Threat of Substitutes	Monitoring	Alternative protein sources, aquaculture competition	
Renewable Energy	Industry Rivalry	Assessment	Energy production technology advancements, government policies	Focus on innovation and partnerships to stay competitive in the fast-growing renewable energy sector.
	Threat of New Entrants	Strategy Development	Low capital barriers, increasing	Build strong relationships with government and

			demand for renewable energy	private stakeholders to maintain entry barriers through policy or patents.
	Bargaining Power of Suppliers	Planning	Solar panel and turbine technology suppliers	Reduce dependency on key suppliers by investing in in-house technology or diversifying supplier base.
	Bargaining Power of Buyers	Implementation	Government tenders, corporate energy buyers	Tailor energy production plans to meet corporate sustainability needs and government tenders.
	Threat of Substitutes	Monitoring	Fossil fuel alternatives, energy storage solutions	Invest in energy storage technologies to complement renewable energy offerings and reduce the threat of fossil fuel substitutes.

This proposed roadmap outlines industry-specific strategies and insights for SMEs using Porter’s Five Forces as a guide to manage competitive pressures. By integrating strategic planning at each stage—assessment, strategy development, planning, implementation, and monitoring—SMEs can effectively mitigate risks and seize opportunities within their respective industries. Key policy interventions from stakeholders such as governments, financial institutions, and technology providers ensure SMEs have the resources necessary to navigate these competitive dynamics, driving both short- and long-term growth.

Table 14 outlines policy recommendations by stakeholders and industry, with a focus on how they address each of Porter’s Five Forces. This structure ensures SMEs in different sectors receive targeted support from governments, financial institutions, industry associations, and other key stakeholders. The goal is to equip SMEs with resources, partnerships, and strategies to manage competitive forces effectively.

Table 14. Proposed Policy Recommendations Categorized by Industry, Force, and Stakeholder.

Industry	Competitive Force	Stakeholder	Policy Recommendation	Purpose
Telecommunications	Industry Rivalry	Government	Provide subsidies for digital transformation and advanced technologies	Help SMEs invest in new technologies to compete in a high-rivalry environment.
		Industry Associations	Foster collaborative platforms for sharing best practices in telecom innovation	Encourage knowledge sharing to help SMEs remain competitive in an evolving telecom market.
	Threat of New Entrants	Financial Institutions	Create financial products supporting capital-intensive projects for new technologies	Help SMEs invest in innovative telecom infrastructure to raise barriers for new entrants.

Retail	Bargainin g Power of Suppliers	Technolo gy Providers	Offer flexible, scalable digital services for smaller telecom players	Reduce dependency on large suppliers by offering flexible, tailored technology services.
	Bargainin g Power of Buyers	Education al Institutio ns	Provide training in customer retention and digital marketing for telecom businesses	Empower SMEs to manage high buyer power by improving customer relationship management skills.
	Threat of Substitute s	Local Communi ties	Encourage local partnerships between telecom SMEs and other tech startups	Strengthen industry ties to reduce reliance on external substitutes.
	Industry Rivalry	Governm ent	Offer tax incentives for retail SMEs investing in omnichannel platforms	Help retailers enhance their competitive advantage in a saturated market.
		Industry Associati ons	Create retail innovation hubs to explore and develop differentiated business models	Drive innovation through industry-specific incubators and research labs.
	Threat of New Entrants	Financial Institutio ns	Provide low-interest loans for SMEs to expand online retail platforms	Support SMEs in expanding into the digital retail space, increasing market entry barriers for new players.
	Bargainin g Power of Suppliers	Governm ent	Regulate fair supplier contracts and ensure equitable pricing policies for SMEs	Protect SMEs from unfair supplier practices by implementing strict regulations on supplier agreements.
	Bargainin g Power of Buyers	Industry Associati ons	Host workshops on improving customer experience and loyalty programs	Help SMEs develop strategies to reduce buyer power by improving customer satisfaction and engagement.
	Threat of Substitute s	Education al Institutio ns	Offer courses on market research and product innovation	Equip SMEs with the skills needed to innovate and stay ahead of substitutes in the market.
	Manufacturin g Industry Rivalry	Governm ent	Introduce R&D tax credits for manufacturing SMEs investing in advanced manufacturing technologies	Incentivize SMEs to improve operational efficiency and maintain a competitive edge.
		Industry Associati ons	Facilitate cross-industry collaborations to drive innovation in manufacturing processes	Encourage knowledge exchange and innovation through partnerships across manufacturing sub- sectors.

Healthcare	Threat of New Entrants	Financial Institutions	Develop specialized loans for SMEs investing in proprietary manufacturing technology	Help SMEs create significant entry barriers by funding proprietary equipment or technologies.
	Bargaining Power of Suppliers	Education al Institutions	Provide training on supplier negotiation techniques for manufacturing firms	Empower SMEs with skills to reduce dependency on large suppliers by fostering negotiation skills.
	Bargaining Power of Buyers	Technology Providers	Implement flexible, on-demand manufacturing platforms to allow SMEs to customize production for specific buyers	Provide SMEs with the flexibility needed to manage buyer power through customized manufacturing services.
	Threat of Substitutes	Local Communities	Encourage collaboration between manufacturing SMEs and local innovators to stay ahead of substitutes	Strengthen innovation ties between local manufacturing SMEs and R&D centers.
	Industry Rivalry	Government	Provide healthcare-specific innovation grants to promote medical technology integration	Help healthcare SMEs invest in new medical technologies to maintain competitiveness in a highly regulated industry.
		Industry Associations	Foster partnerships with universities and hospitals to create innovative healthcare solutions	Encourage collaboration between healthcare SMEs and academic institutions to drive innovation and service differentiation.
	Threat of New Entrants	Financial Institutions	Offer long-term investment options for healthcare SMEs developing new medical technologies	Support healthcare SMEs by funding high-cost R&D projects that create significant barriers to new entrants.
	Bargaining Power of Suppliers	Government	Implement policies to control critical healthcare equipment prices	Protect SMEs from being over-reliant on large suppliers of essential healthcare products by enforcing fair pricing policies.
	Bargaining Power of Buyers	Education al Institutions	Offer training on patient-centered care models and flexible healthcare pricing strategies	Equip healthcare SMEs to manage high buyer power by improving patient satisfaction and service delivery models.
	Threat of Substitutes	Local Communities	Encourage local healthcare innovation incubators to address emerging medical substitutes	Promote collaboration between healthcare SMEs and local communities to develop innovative solutions that reduce substitutes.

Tourism	Industry Rivalry	Governm ent	Provide tourism-specific innovation grants to create niche market services	Help tourism SMEs develop unique experiences that stand out in a highly competitive industry.
		Industry Associati ons	Facilitate tourism industry conferences for knowledge sharing on customer experience and service differentiation	Encourage collaboration among tourism SMEs to share best practices and explore service differentiation.
		Threat of New Entrants	Offer low-interest loans for tourism SMEs to improve digital marketing and online booking systems	Support SMEs in enhancing their digital presence, creating a barrier for new entrants.
	Bargainin g Power of Suppliers	Local Communi ties	Promote local supplier partnerships to ensure fair pricing for tourism-related services	Encourage local partnerships to strengthen tourism SMEs' access to competitive supplier pricing.
	Bargainin g Power of Buyers	Education al Institutio ns	Offer training on enhancing customer satisfaction and loyalty through customized vacation packages	Help SMEs improve customer engagement and reduce buyer power in the tourism sector.
	Threat of Substitutes	Technolo gy Providers	Implement platforms for tourism SMEs to collaborate and improve service innovation	Help tourism SMEs develop innovative services that reduce the risk of losing customers to substitutes.
Fishing Industry	Industry Rivalry	Governm ent	Provide grants for sustainable fishing practices and eco-certification	Promote competitiveness through sustainable fishing certifications and eco-friendly practices.
		Industry Associati ons	Facilitate knowledge-sharing platforms to explore sustainable practices in fishing	Encourage collaboration among SMEs to innovate and reduce environmental impact, improving their market positioning.
	Threat of New Entrants	Financial Institutio ns	Create funding programs for eco-certified fishing SMEs to improve market positioning	Support SMEs that adhere to sustainability standards, creating barriers for new entrants in the fishing industry.
	Bargainin g Power of Suppliers	Education al Institutio ns	Offer courses on sustainable supply chain management for the fishing industry	Equip SMEs with skills to negotiate better deals with suppliers by implementing sustainable practices.
	Bargainin g Power of Buyers	Local Communi ties	Promote local partnerships between fishing SMEs and buyers	Encourage local buyers to source sustainably, helping SMEs manage

Renewable Energy	Threat of Substitutes	Government	to prioritize sustainable seafood practices Promote research into alternative seafood solutions to help SMEs adapt to changing market demands	buyer power by offering eco-friendly options. Help fishing SMEs innovate and stay ahead of alternatives like plant-based seafood.
	Industry Rivalry	Government	Offer R&D tax credits for renewable energy SMEs investing in advanced storage technologies	Help renewable energy SMEs innovate in a highly competitive and rapidly evolving market.
		Industry Associations	Host renewable energy conferences to foster industry collaboration on technological advancements	Encourage SMEs to share and explore innovations in renewable energy technologies.
	Threat of New Entrants	Financial Institutions	Provide funding for renewable energy SMEs focused on solar and wind technology innovation	Support SMEs developing cutting-edge renewable energy technologies, increasing entry barriers for new competitors.
	Bargaining Power of Suppliers	Technology Providers	Offer affordable, scalable renewable energy solutions to support SME growth	Provide flexible technology solutions that allow SMEs to manage supplier power more effectively.
	Bargaining Power of Buyers	Government	Implement policies that support government-corporate partnerships in energy production contracts	Help renewable energy SMEs secure long-term contracts with governments or large buyers.
	Threat of Substitutes	Local Communities	Encourage community partnerships to expand renewable energy solutions that meet local needs	Promote local collaboration to reduce the risk of substitutes such as fossil fuels.

This policy roadmap provides industry-specific recommendations for stakeholders aiming to help SMEs navigate competitive pressures through Porter’s Five Forces. By targeting key competitive challenges—industry rivalry, new entrants, supplier and buyer power, and substitutes—policymakers, industry associations, and financial institutions can support SMEs with customized solutions. These initiatives not only bolster competitiveness but also foster sustainable growth across different industries.

The application of Porter’s Five Forces model provides a robust framework for understanding the competitive dynamics that shape the performance of SMEs across various industries. Each of the five forces—bargaining power of suppliers, buyer power, threat of substitutes, threat of new entrants, and industry rivalry—has a unique impact depending on the industry context. By analyzing these forces, SMEs can identify key challenges and opportunities within their markets and develop strategic responses that enhance their competitiveness. This section explores how different industries, including manufacturing, retail, IT, and renewable energy, are affected by these forces and highlights insights from real case studies to provide a comprehensive understanding of how SMEs can navigate these competitive pressures.

RQ1: How does the bargaining power of suppliers impact the performance of SMEs in various industries?

The bargaining power of suppliers is especially critical in sectors like manufacturing and healthcare, where SMEs depend heavily on key suppliers for essential inputs. In the manufacturing industry, as highlighted in the paper, the high bargaining power of suppliers drives up input costs, which can erode profitability if not managed properly. Digital platforms can mitigate this issue by providing alternative suppliers, but industries such as electronics manufacturing remain vulnerable due to limited options for critical components like microchips. Therefore, SMEs in these sectors must strategically manage their supplier relationships and explore digital solutions for supply chain flexibility.

RQ2: What is the effect of buyer bargaining power on the competitive positioning and financial performance of SMEs?

In industries such as retail and food manufacturing, the bargaining power of buyers is significant. SMEs that sell to large retailers face constant pressure to lower prices, which can shrink their margins, as seen in the case studies of retail and food manufacturing. E-commerce platforms amplify this by allowing customers to easily switch suppliers. SMEs in these industries can counteract buyer power by differentiating their products and enhancing customer service to build loyalty. For instance, in the retail sector, firms that adopt digital marketing strategies and focus on customer experiences are better able to retain buyers, even when faced with intense price competition.

RQ3: How do threats from substitute products or services influence innovation and strategic decisions in SMEs?

Substitute products pose a major threat to SMEs in sectors like the food industry and traditional services, where competition from innovative alternatives is constantly growing. The case study on food manufacturing, for instance, showed that SMEs face growing competition from plant-based alternatives, compelling them to innovate or risk losing market share. Similarly, traditional service providers such as taxi companies have been disrupted by ride-hailing apps like Uber. SMEs in such sectors must continuously innovate their offerings and maintain high standards of product quality to mitigate the impact of substitutes.

RQ4: To what extent do barriers to entry affect the growth and sustainability of SMEs in competitive markets?

Barriers to entry play a crucial role in determining the level of new competition SMEs face. In sectors with high capital requirements, such as renewable energy, SMEs are shielded from new entrants, allowing them to focus on growth and sustainability. Conversely, in industries like retail and cloud-based services, where entry barriers are low, SMEs must continuously innovate and enhance operational efficiency to remain competitive. SMEs in niche markets, such as those identified in the case studies on renewable energy, can use their local knowledge and specialized offerings to defend against new entrants effectively.

RQ5: How does competitive rivalry within the Information Technology (IT) sector influence the strategic responses and performance outcomes of SMEs?

Competitive rivalry in the IT sector is intense, particularly for SMEs offering similar software or digital services. As discussed in the case study on telecommunications and IT, SMEs in this industry often resort to non-price competitive strategies, such as improving their branding or customer service, to differentiate themselves. The growing importance of digital marketing tools like data analytics and social media campaigns helps SMEs reach a wider audience and improve market positioning. However, those SMEs that fail to adopt such strategies are often outcompeted by rivals who offer personalized, innovative services, emphasizing the need for constant adaptation and strategic differentiation.

The insights drawn from this analysis highlight that the bargaining power of suppliers can have a significant impact on industries like manufacturing and healthcare, where SMEs must carefully manage supply relationships to maintain profitability. In industries where buyer power is strong, such as retail and food manufacturing, differentiation and customer loyalty are critical strategies for countering price pressures. The threat of substitutes is particularly pronounced in traditional industries like food and transportation, where innovation is essential for survival in the face of disruptive alternatives. Barriers to entry serve as both a shield and a challenge; sectors with high entry barriers, such as pharmaceuticals and renewable energy, offer more protection to established SMEs, while low-barrier industries like cloud computing face constant disruption. Lastly, competitive rivalry in industries such as IT and telecommunications forces SMEs to adopt non-price competitive strategies, focusing on branding and customer service to distinguish themselves in saturated markets. By leveraging these insights, SMEs can develop targeted strategies that address the unique competitive challenges they face.

5. Conclusions

This systematic review has provided a comprehensive analysis of how Porter's Five Forces framework impacts the performance of Small and Medium-Sized Enterprises (SMEs) across various industries. Through a detailed exploration of industry rivalry, the threat of new entrants, the bargaining power of suppliers, the bargaining power of buyers, and the threat of substitutes, this review has offered valuable insights for both academic and business audiences on how SMEs can strategically navigate competitive pressures to achieve sustainable growth.

The findings reveal that digital transformation, financial literacy, and innovation are critical drivers of SME competitiveness. By adopting these strategies, SMEs can mitigate the effects of intense competition, enhance customer engagement, and optimize their supply chains, leading to improved profitability and market positioning. For example, industries such as retail and telecommunications benefit significantly from digital tools like AI-driven marketing and predictive analytics, which allow for more personalized customer experiences and better inventory management. Meanwhile, in sectors like healthcare and manufacturing, the bargaining power of suppliers plays a crucial role, and the adoption of technologies like IoT and blockchain helps SMEs maintain operational efficiency and secure data transactions. One of the most significant challenges identified in the review is the barrier to entry in various industries, particularly in technology-driven sectors. High capital requirements and the need for specialized knowledge prevent new entrants from easily penetrating these markets, giving established SMEs a competitive advantage. However, for SMEs in industries with low entry barriers, such as e-commerce or renewable energy, cost leadership and differentiation become vital strategies for staying ahead of new competitors. The threat of substitutes also emerges as a major factor driving innovation in SMEs. The need to continuously improve product offerings and services, as seen in industries like food and beverage or ride-hailing services, forces SMEs to adapt to changing market demands to remain relevant. This constant innovation not only helps SMEs differentiate themselves from competitors but also ensures long-term customer loyalty and market expansion. This review also highlights several key policy recommendations for enhancing SME competitiveness. Government support through subsidies for digitalization, financial institutions providing tailored products, and industry associations promoting networking opportunities are crucial in helping SMEs overcome financial and strategic barriers. Additionally, educational institutions can play a pivotal role in improving managerial competencies by offering training in strategic frameworks and financial literacy, while technology providers must continue offering affordable and accessible solutions to SMEs.

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