Rural Development in Malaysia: A Systematic Literature Review of Challenges, Determinants, and Future Research Directions

Muhammad Shaharudin bin Samsurijan[1], Nurul Syazwani Aimi binti Ramlan[*2], Mohamad Syazmin bin Sulaiman[3]

[1,2]School of Social Sciences, Universiti Sains Malaysia (USM), Pulau Pinang, Malaysia.

[3]Fakulti Kejuruteraan dan Alam Bina, Universiti Kebangsaan Malaysia (UKM), Selangor, Malaysia

***Corresponding Author: Nurul Syazwani Aimi binti Ramlan**
Email: aimiramlan97@gmail.com

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ABSTRACT

Rural development remains a national priority in Malaysia due to its significant contribution to socioeconomic growth, poverty reduction, regional equity, and sustainable development. Despite continuous government initiatives, rural areas continue to experience challenges related to infrastructure disparities, digital inequality, governance, and environmental sustainability. This study aims to systematically synthesise recent empirical evidence on rural development in Malaysia by identifying the key challenges, determinants, dominant research themes, and future research directions. A Systematic Literature Review (SLR) was conducted following the PRISMA 2020 guidelines. Literature was retrieved from the Scopus and Web of Science (WoS) databases using predefined search strategies. Following a rigorous screening and eligibility process, 20 empirical journal articles published between 2021 and 2026 were included in the qualitative synthesis. The extracted data were analysed using thematic synthesis to identify recurring patterns across the selected studies. The findings reveal six major themes: (1) Infrastructure and Accessibility, (2) Socioeconomic Development and Rural Livelihoods, (3) Community Participation and Empowerment, (4) Governance and Institutional Capacity, (5) Digital Inclusion and Technology, and (6) Environmental Sustainability and Rural Resilience. The review demonstrates that successful rural development depends on the integration of effective governance, community participation, infrastructure development, digital transformation, human capital enhancement, and environmental stewardship rather than isolated sectoral interventions. Persistent regional disparities, particularly in remote areas of Sabah and Sarawak, indicate the need for more inclusive and coordinated policy implementation. This review contributes to the existing literature by providing a comprehensive synthesis of contemporary empirical evidence, identifying research gaps, and offering evidence-based recommendations to support policymakers, practitioners, and researchers in advancing sustainable and resilient rural development in Malaysia.

Keywords: Rural Development; Systematic Literature Review; Malaysia; Sustainable Development; PRISMA 2020

INTRODUCTION

Rural development remains a strategic priority for many developing countries because it plays a fundamental role in promoting inclusive economic growth, reducing regional inequalities, improving social well-being, and achieving sustainable development goals (Abdul Rashid et al. (2023). In Malaysia, despite remarkable economic progress and rapid urbanisation over the past decades, rural areas continue to contribute significantly to agriculture, natural resource management, food security, tourism, and cultural preservation. Consequently, reducing the development gap between rural and urban areas has become an important national agenda under successive Malaysia Plans. Recent policy initiatives have focused on improving infrastructure, digital connectivity, entrepreneurship, human capital, and community empowerment to ensure that rural community's benefit from balanced socioeconomic development. Nevertheless, significant disparities remain across different regions, particularly between Peninsular Malaysia and East Malaysia (Sabah and Sarawak), where unequal

access to infrastructure, public services, digital technologies, and economic opportunities continues to hinder sustainable rural transformation (Abdul Rashid et al., 2023) The understanding of rural development has evolved considerably from a traditional emphasis on agricultural productivity and poverty alleviation to a multidimensional concept encompassing economic diversification, environmental sustainability, social inclusion, governance effectiveness, technological advancement, and community resilience (Ma et al., 2023). In Malaysia, recent studies have increasingly examined issues such as digital inclusion, rural entrepreneurship, sustainable agriculture, climate adaptation, governance, youth migration, and community participation as essential components of rural development (Abdul Rashid et al., 2023). At the same time, digital transformation has become an important driver of rural competitiveness by improving access to information, financial services, markets, education, and government services. However, unequal digital infrastructure, limited digital literacy, institutional constraints, and regional disparities continue to impede rural development, particularly in remote communities (Ma et al., 2023; OECD, 2024). These findings suggest that rural development should be understood as a comprehensive process involving economic, social, institutional, technological, and environmental dimensions rather than a sector-specific intervention.

Although the volume of research on rural development in Malaysia has increased substantially in recent years, the existing literature remains fragmented across multiple disciplines, including agriculture, economics, public policy, environmental management, and community development. Most previous studies have focused on specific sectors, geographical locations, or government programmes, with relatively few attempts to synthesise the overall evidence concerning the key challenges, determinants, and emerging research trends in Malaysian rural development. Furthermore, recent developments relating to digital transformation, climate resilience, sustainable development, and post-pandemic rural recovery have introduced new research priorities that have yet to be systematically reviewed. Therefore, a comprehensive synthesis of the current literature is needed to consolidate existing knowledge and identify future research opportunities. Accordingly, this study conducts a Systematic Literature Review (SLR) following the PRISMA 2020 guidelines to examine peer-reviewed studies published between 2021 and 2026. Specifically, the review aims to identify the key challenges affecting rural development in Malaysia, examine the determinants influencing successful rural development initiatives, synthesise the dominant research themes and methodological characteristics of existing studies, and propose future research directions to support evidence-based policymaking and sustainable rural transformation in Malaysia.

LITERATURE REVIEW

Concept of Rural Development

Rural development is widely recognised as a multidimensional process that extends beyond agricultural production and poverty alleviation to encompass economic growth, social inclusion, environmental sustainability, institutional capacity, and improvements in the overall quality of life of rural communities (Ma et al., 2023; OECD, 2024). Contemporary literature argues that rural areas should no longer be perceived merely as centres of agricultural activities but as dynamic spaces capable of generating innovation, entrepreneurship, tourism, digital economic activities, and sustainable resource management (Undurraga & Pokorny, 2024). This broader perspective reflects the transition from traditional sector-based development towards integrated territorial development, whereby economic, social, environmental, and governance dimensions are addressed simultaneously to achieve balanced and inclusive development. Consequently, rural development has become an essential component of national development strategies because it contributes to reducing regional disparities, enhancing social equity, and strengthening long-term economic resilience (Ma et al., 2023; OECD, 2024).

The concept of rural development has further evolved in response to global challenges such as climate change, technological advancement, demographic transition, and sustainable development. Recent studies emphasise that successful rural development depends not only on infrastructure investment but also on strengthening institutional effectiveness, human capital, community participation, innovation, and digital connectivity (Abdul Rashid et al., 2023; Barbier, 2023). The increasing adoption of the Sustainable Development Goals (SDGs) has further expanded the scope of rural development by integrating environmental protection, social well-being, economic resilience, and good governance into development planning Hashim et al. (2025). Accordingly,

contemporary rural development is increasingly associated with inclusive growth, resilience, and sustainability rather than solely focusing on increasing rural income or agricultural productivity.

Recent literature further highlights that rural development should be understood through an integrated systems perspective in which governments, local institutions, private organisations, and rural communities collaborate to achieve sustainable outcomes (Undurraga & Pokorny, 2024). This collaborative approach recognises that rural transformation requires coordinated policies across multiple sectors, including education, healthcare, transportation, digital infrastructure, entrepreneurship, environmental management, and public administration. Furthermore, researchers increasingly argue that local participation and institutional capacity are fundamental in ensuring that development programmes respond effectively to local needs and remain sustainable over time (Abdul Rashid et al., 2023). Therefore, the concept of rural development has progressively shifted from a government-driven intervention towards a participatory and multidimensional development framework that balances economic, social, environmental, technological, and governance objectives.

The Evolution of Rural Development in Malaysia

Rural development has remained a central component of Malaysia's national development agenda since independence, evolving from a policy primarily focused on poverty eradication and agricultural modernisation towards a broader framework emphasising inclusive growth, sustainability, and regional competitiveness. In recent years, rural development policies have increasingly aligned with the aspirations of the Shared Prosperity Vision 2030, the Twelfth Malaysia Plan (2021–2025), and the Sustainable Development Goals (SDGs), reflecting the Government's commitment to reducing socioeconomic disparities between rural and urban communities. These policy directions emphasise integrated rural development through improvements in infrastructure, digital connectivity, entrepreneurship, education, healthcare, environmental sustainability, and community empowerment (Abdul Rashid et al., 2023; OECD, 2024). The transition demonstrates that rural development is no longer viewed solely as agricultural advancement but as a comprehensive strategy for enhancing human well-being, strengthening local economies, and promoting balanced regional development.

The contemporary rural development agenda in Malaysia has also been influenced by rapid technological advancement and the increasing importance of digital transformation. Expanding broadband coverage, improving digital literacy, and supporting digital entrepreneurship have become key priorities for enhancing rural productivity and reducing geographical inequalities. Nevertheless, considerable challenges remain, particularly in remote areas of Sabah and Sarawak, where inadequate digital infrastructure, limited accessibility, and unequal access to public services continue to constrain socioeconomic development. The OECD (2024) further highlights that micro, small and medium enterprises operating in rural areas face persistent barriers related to digital connectivity and market access, limiting their ability to participate effectively in the digital economy. Similarly, Hashim (2023) argues that investments in digital infrastructure alone are insufficient unless accompanied by capacity building, digital skills development, and institutional support that enable rural communities to fully utilise emerging technologies.

Recent literature further indicates that rural development in Malaysia has gradually shifted towards a more integrated and people-centred approach that recognises the importance of governance, community participation, institutional collaboration, and environmental sustainability. Rather than implementing isolated sectoral programmes, policymakers increasingly promote multi-sectoral strategies that integrate economic development, environmental conservation, social inclusion, and technological innovation to strengthen rural resilience. Abdul Rashid et al. (2023) proposed the Malaysia Assessment Measure for Modern Rural Development (MAMRD) as a framework for evaluating modern rural development using multiple socioeconomic indicators, reflecting the growing need for evidence-based policy assessment. Likewise, systematic reviews by Natarajan et al. (2022) emphasise that effective rural development depends on improving the broader institutional and socioeconomic context rather than relying exclusively on technical or financial interventions. These developments demonstrate that rural development in Malaysia is progressively transitioning towards a holistic and sustainable model that balances economic growth with social equity, environmental stewardship, and institutional effectiveness.

Key Challenges in Rural Development

Despite continuous government investment and policy interventions, rural development in Malaysia continues to face multiple interconnected challenges that limit the effectiveness of development initiatives. One of the most persistent challenges is the unequal provision of physical infrastructure and public services across rural regions, particularly in geographically remote areas such as Sabah and Sarawak. Limited accessibility, difficult terrain, inadequate transportation networks, and insufficient basic infrastructure have slowed socioeconomic progress and reduced the effectiveness of development programmes Zakey et al. (2022). These structural constraints also affect access to quality healthcare, education, markets, and government services, ultimately reducing opportunities for improving rural livelihoods. Furthermore, the increasing frequency of climate-related events, including floods and extreme weather conditions, has intensified the vulnerability of rural communities that depend heavily on agriculture and natural resources, thereby creating additional pressure on sustainable rural development strategies (UNDP, 2026).

Another critical challenge concerns the widening digital divide between rural and urban communities. Although Malaysia has made considerable progress in expanding broadband coverage through various national initiatives, significant disparities remain in terms of internet accessibility, affordability, digital literacy, and technology adoption. Rural businesses, particularly micro, small, and medium-sized enterprises (MSMEs), continue to experience difficulties in adopting digital innovations because of limited infrastructure, inadequate digital competencies, financial constraints, and insufficient institutional support Kamarudin et al. (2024). These barriers reduce the ability of rural communities to participate effectively in the digital economy, access online education, utilise e-government services, and improve business competitiveness. Recent evidence also suggests that digital transformation alone cannot guarantee inclusive rural development unless accompanied by investments in human capital, institutional capacity, and community empowerment that enable rural populations to benefit from technological advancements.

Socioeconomic and demographic challenges further complicate rural development in Malaysia. Limited employment opportunities, lower income levels, youth outmigration, population ageing, and uneven institutional capacity continue to undermine the long-term sustainability of rural communities. Young people increasingly migrate to urban centres in search of better education and employment prospects, resulting in labour shortages, slower local economic growth, and demographic imbalances within rural areas Abdul Malek et al. (2022). In addition, fragmented governance, limited coordination among implementing agencies, and inconsistent community participation often reduce the effectiveness of rural development programmes despite substantial public investment Kasim et al. (2024). These findings indicate that addressing rural development challenges requires integrated policy interventions that simultaneously strengthen infrastructure, governance, digital inclusion, human capital, institutional collaboration, and community participation rather than relying on isolated sector-specific initiatives.

Determinants of Successful Rural Development

The success of rural development is influenced by multiple interrelated determinants that collectively shape the socioeconomic transformation of rural communities. Recent literature consistently identifies governance quality, institutional capacity, infrastructure development, and human capital as fundamental drivers of sustainable rural development (Ma et al., 2023; OECD, 2024). Effective governance enables the formulation and implementation of responsive development policies, while capable institutions facilitate efficient resource allocation, inter-agency coordination, and continuous programme evaluation. At the same time, investments in transportation networks, utilities, healthcare, education, and digital infrastructure enhance accessibility and improve the overall quality of life in rural communities. Abdul Rashid et al. (2023) further emphasised that modern rural development should be evaluated through multiple dimensions rather than relying solely on economic indicators, highlighting the importance of balanced development across social, environmental, and institutional domains. These determinants collectively strengthen rural resilience and create favourable conditions for long-term and inclusive development.

Community participation has also emerged as one of the most influential determinants of successful rural development. Contemporary studies argue that development programmes are more effective when local communities actively participate in planning, implementation, monitoring, and decision-making processes, thereby increasing programme ownership, transparency, and long-term sustainability (Ali et al., 2025). Participatory governance enables development initiatives to reflect local priorities, improve accountability, and strengthen collaboration between government agencies and rural stakeholders. Furthermore, social capital, local leadership, and institutional trust encourage collective action, knowledge sharing, and community resilience, all of which contribute to sustainable rural transformation. Rather than adopting purely top-down approaches, recent studies advocate hybrid governance models that integrate national policy direction with local participation and adaptive decision-making to address diverse rural needs more effectively.

Another important determinant is the ability of rural communities to adapt to technological, economic, and environmental changes. Digital connectivity, innovation, entrepreneurship, and lifelong learning have become increasingly important in enhancing rural competitiveness and expanding economic opportunities. OECD (2024) highlights that improving digital infrastructure alone is insufficient unless accompanied by investments in digital literacy, entrepreneurial capability, financial inclusion, and institutional support that enable rural communities to utilise emerging technologies effectively. Similarly, sustainable rural development increasingly depends on environmental stewardship, climate adaptation, and integrated policy coordination that balance economic growth with natural resource conservation (UNDP, 2026). Consequently, successful rural development requires a comprehensive approach that simultaneously strengthens governance, institutional effectiveness, community participation, technological readiness, human capital, and environmental sustainability to achieve resilient and inclusive rural transformation.

Theoretical Perspectives on Rural Development

Rural development has been interpreted through various theoretical perspectives that explain how socioeconomic transformation can be achieved within rural communities. Among these, the Sustainable Livelihoods Framework (SLF) has become one of the most widely adopted frameworks because it emphasises the ability of households and communities to utilise available assets including human, social, natural, physical, and financial capital to improve their livelihoods while maintaining long-term resilience (Natarajan et al., 2022). Recent applications of the framework further highlight that sustainable rural development depends on strengthening people's adaptive capacity, reducing vulnerability, and improving access to productive resources and essential services (Ma et al., 2023). Within the Malaysian context, the SLF provides a comprehensive lens for understanding how infrastructure development, education, digital connectivity, and institutional support collectively influence rural livelihoods and community resilience. Consequently, the framework supports a holistic assessment of rural development beyond conventional economic indicators by integrating social, environmental, and institutional dimensions.

Another influential perspective is Community Development Theory, which emphasises the active participation of local communities in planning, implementing, and evaluating development initiatives. Rather than viewing rural populations as passive beneficiaries, this theory argues that sustainable development can only be achieved when local stakeholders actively contribute to decision-making processes and collectively address local challenges (Phillips & Pittman, 2022). Recent studies similarly demonstrate that community participation strengthens local ownership, social capital, institutional trust, and collaborative governance, thereby improving the effectiveness and sustainability of rural development programmes (Ali et al., 2025). In Malaysia, community-based development approaches have increasingly been promoted through rural entrepreneurship, community empowerment, and participatory governance initiatives that encourage cooperation among government agencies, local organisations, and rural residents. These approaches indicate that strengthening local capacity remains essential for achieving inclusive and sustainable rural transformation.

Institutional Theory further complements these perspectives by explaining how formal institutions, governance structures, policies, and organisational practices influence development outcomes. According to this perspective, effective rural development depends not only on financial investment but also on institutional quality, policy consistency, inter-agency coordination, and administrative capacity (Scott, 2014). Recent literature indicates that countries with stronger governance systems and effective institutional coordination tend to achieve more

sustainable rural development outcomes because development policies are implemented more efficiently and adapted to local needs (OECD, 2024; UNDP, 2026). Integrating the Sustainable Livelihoods Framework, Community Development Theory, and Institutional Theory therefore provides a comprehensive theoretical foundation for this review by recognising that successful rural development is shaped by the interaction between livelihood assets, community participation, and institutional effectiveness. These complementary perspectives also provide an appropriate basis for synthesising the challenges, determinants, and future research directions identified in the Malaysian rural development literature.

METHODOLOGY

A systematic literature review (SLR) was conducted to address the research question: "What are the key challenges, determinants, and future research directions of rural development in Malaysia?" The SLR approach provides a rigorous and transparent method for identifying, evaluating, and synthesising existing evidence to answer specific research questions through a structured and reproducible review process (Snyder, 2019; Page et al., 2021). In recent years, SLR has become one of the most widely adopted research methods in the social sciences because it enables researchers to consolidate fragmented knowledge, identify research trends, evaluate methodological patterns, and reveal knowledge gaps within a particular research domain (Xiao & Watson, 2019; Paul & Criado, 2020). In the context of this study, the SLR approach facilitated a comprehensive synthesis of contemporary literature on rural development in Malaysia by integrating findings from studies published between 2021 and 2026. The review therefore provides a consolidated understanding of the major challenges affecting rural development, the determinants that influence successful rural transformation, and potential directions for future research.

To ensure methodological rigour and transparency, this study adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) framework proposed by Page et al. (2021). PRISMA 2020 provides internationally recognised guidelines that improve the transparency, consistency, and reproducibility of systematic reviews through a structured article selection process. Following the PRISMA framework, the review was conducted through three principal stages: identification, screening, and inclusion. During the identification stage, potentially relevant articles were retrieved from selected electronic databases using predefined search strings. The screening stage involved the removal of duplicate records and the application of predefined inclusion and exclusion criteria to assess the relevance of each study. Finally, the remaining full-text articles were evaluated for eligibility before being included in the final review.

Search Strategy

A systematic literature search was conducted using two internationally recognised bibliographic databases, namely Scopus and Web of Science (WoS). These databases were selected because they index high-quality peer-reviewed journals across multidisciplinary fields, including rural development, regional planning, public policy, sustainability, development studies, environmental management, and the social sciences (Page et al., 2021). Employing both databases improved the comprehensiveness of the search process, minimised publication bias, and enhanced the likelihood of identifying relevant empirical studies on rural development in Malaysia.

The search strategy was developed based on three principal concepts: rural development, development determinants and challenges, and Malaysia. Several synonymous keywords and related terms were incorporated to maximise the retrieval of relevant studies. These included "rural development", "rural transformation", "rural community development", "rural livelihood", "rural sustainability", "community development", "regional development", "rural economy", "rural infrastructure", "digital inclusion", "governance", "challenge", "barrier", "determinant", "factor", "driver"*, "Malaysia", "Sabah", "Sarawak", and "Peninsular Malaysia". The search terms were formulated based on previous systematic review studies and refined through preliminary database searches to ensure alignment with the objectives of this review.

Boolean operators (AND and OR) and truncation symbols (*) were employed to combine keywords and capture variations of search terms. The search syntax was adapted to the indexing requirements of each database while maintaining consistency across the three search concepts. The search was restricted to studies published between 2020 and 2026, written in English, available in full text, and published as peer-reviewed journal articles. This

time frame was selected to capture contemporary evidence reflecting recent developments in Malaysia's rural development agenda, particularly those associated with the Twelfth Malaysia Plan, digital transformation initiatives, sustainable development, and post-pandemic rural recovery.

Table 1. Search Strategy Used in the Selected Electronic Databases

Database	Search String	Search Filters
Scopus	TITLE-ABS-KEY(("rural development" OR "rural transformation" OR "rural community development" OR "rural livelihood*" OR "sustainable rural development" OR "rural economy" OR "community development") AND ("challenge*" OR "barrier*" OR "determinant*" OR "factor*" OR "driver*" OR "governance" OR "digital inclusion" OR "infrastructure") AND (Malaysia OR Malaysian OR Sabah OR Sarawak OR "Peninsular Malaysia"))	• Year: 2021–2026 • Document Type: Article • Language: English • Source Type: Journal
Web of Science (WoS)	TS=(("rural development" OR "rural transformation" OR "rural community development" OR "rural livelihood*" OR "sustainable rural development") AND ("challenge*" OR "determinant*" OR "barrier*" OR "factor*" OR "driver*" OR governance OR infrastructure OR "digital inclusion") AND (Malaysia OR Malaysian OR Sabah OR Sarawak OR "Peninsular Malaysia"))	• Year: 2021–2026 • Document Type: Article • Language: English • Indexes: SSCI, SCI-Expanded, ESCI

Inclusion and Exclusion Criteria

Clear inclusion and exclusion criteria were established before the screening process to ensure that only relevant, credible, and high-quality studies were included in this systematic literature review. The inclusion criteria focused on empirical studies examining rural development within the Malaysian context. Studies were considered eligible if they investigated one or more dimensions of rural development, including socioeconomic development, rural infrastructure, governance, community participation, entrepreneurship, digital inclusion, environmental sustainability, rural livelihoods, human capital development, or public service delivery. Studies addressing rural transformation, regional development, and sustainable rural communities were also included when they directly contributed to understanding rural development in Malaysia.

Eligible studies were required to investigate rural communities or rural regions in Malaysia, including Peninsular Malaysia, Sabah, and Sarawak. Only empirical studies employing quantitative, qualitative, or mixed-method research designs were considered. Furthermore, studies had to be published as peer-reviewed journal articles in English between **2021 and 2026** and have full-text availability. These criteria ensured that the review synthesised contemporary evidence reflecting current rural development policies, challenges, determinants, and emerging research trends in Malaysia.

Studies were excluded if they were non-empirical publications, including systematic literature reviews, narrative reviews, editorials, opinion papers, conference proceedings, book chapters, policy briefs, dissertations, and unpublished manuscripts. Studies conducted outside Malaysia or those focusing exclusively on urban development without a clear rural context were also excluded. In addition, articles published before 2021, non-English publications, studies without accessible full texts, and studies unrelated to rural development were removed during the screening process to ensure consistency with the objectives of this review.

Table 2. Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Type of literature	Peer-reviewed empirical journal articles	Reviews, editorials, opinion papers, conference papers, book chapters, dissertations

Publication period	**2021–2026**	Before 2021
Language	English	Non-English
Country	Malaysia	Countries other than Malaysia
Study population	Rural communities, households, local authorities, entrepreneurs, farmers, and rural stakeholders	Urban populations without a rural context
Research focus	Rural development, rural livelihoods, infrastructure, governance, digital inclusion, sustainability, entrepreneurship, community participation	Studies unrelated to rural development
Study design	Quantitative, qualitative, and mixed-method studies	Reviews, conceptual papers, commentaries, conference abstracts
Availability	Full-text journal articles	Articles without full-text access

Identification Phase

During the identification phase, a comprehensive literature search was conducted using two electronic databases, namely Scopus and Web of Science (WoS). The initial search identified a total of 204 records, comprising 128 records retrieved from Scopus and 76 records from Web of Science. These records represented all potentially relevant studies identified through the predefined search strategy before the removal of duplicate records. The search was conducted using combinations of keywords related to rural development, rural transformation, rural livelihoods, infrastructure, governance, community participation, digital inclusion, sustainability, and Malaysia.

The identification phase served as the foundation of the systematic review by establishing a comprehensive pool of potentially relevant studies on rural development in Malaysia. However, not all identified records were eligible for inclusion in the review. Each record subsequently underwent duplicate removal, title and abstract screening, full-text assessment, and quality appraisal before being considered for the final qualitative synthesis. This systematic procedure ensured that only studies directly addressing the objectives of the review were retained.

Screening Phase

Following the identification phase, duplicate records were identified and removed. A total of 34 duplicate records were excluded because the same articles were indexed in both Scopus and Web of Science. After duplicate removal, 170 unique records remained and proceeded to the title and abstract screening stage.

The remaining records were screened based on their titles and abstracts to determine their relevance to the objectives of the review. During this process, 140 records were excluded because they did not satisfy the predetermined inclusion criteria. Specifically, 38 studies were published before 2021, 17 studies were non-English publications, 24 studies were review articles, book chapters, conference proceedings, or other non-empirical publications, 32 studies were unrelated to rural development, 18 studies were conducted outside Malaysia or focused exclusively on urban settings, and 11 studies contained titles or abstracts that were not sufficiently relevant to the scope of the review.

Following the title and abstract screening, 30 articles remained and were considered eligible for full-text assessment.

Eligibility Phase

During the eligibility phase, the full texts of the remaining 30 articles were examined in detail to determine their suitability for inclusion in the review. Each article was evaluated based on its research objectives, study setting, geographical context, research design, participant characteristics, and the extent to which it addressed rural development within Malaysia. Particular attention was given to empirical studies reporting findings related to rural infrastructure, socioeconomic development, community participation, governance, entrepreneurship, digital inclusion, rural livelihoods, human capital, environmental sustainability, and public service delivery.

A total of 10 full-text articles were excluded during this phase because they did not fully satisfy the eligibility criteria. Among these, 4 studies did not specifically focus on rural development, 2 studies lacked sufficient empirical evidence, 2 studies were unavailable in full-text format, and 2 studies reported findings that substantially overlapped with previously published studies.

Following the full-text assessment, 20 empirical journal articles fulfilled all inclusion criteria and were subsequently included in the final qualitative synthesis.

Inclusion Phase

The final inclusion phase consisted of 20 empirical studies published between 2021 and 2026. These studies represented diverse geographical contexts across Malaysia, including Peninsular Malaysia, Sabah, and Sarawak, and employed quantitative, qualitative, and mixed-method research designs. The selected studies were considered suitable for synthesis because they directly examined rural development and addressed issues related to socioeconomic transformation, infrastructure provision, governance, community participation, rural entrepreneurship, digital connectivity, environmental sustainability, and rural livelihoods.

The final included studies provided evidence across several major themes associated with rural development in Malaysia. These themes included infrastructure and accessibility, socioeconomic inequality, human capital development, governance and institutional capacity, community participation, digital inclusion, rural entrepreneurship, environmental sustainability, and livelihood resilience. Since several studies addressed more than one thematic area, the number of studies represented within each theme exceeded the total number of included articles. The synthesis of these overlapping themes enabled a more comprehensive understanding of the key challenges, determinants, and future research directions associated with rural development in Malaysia.

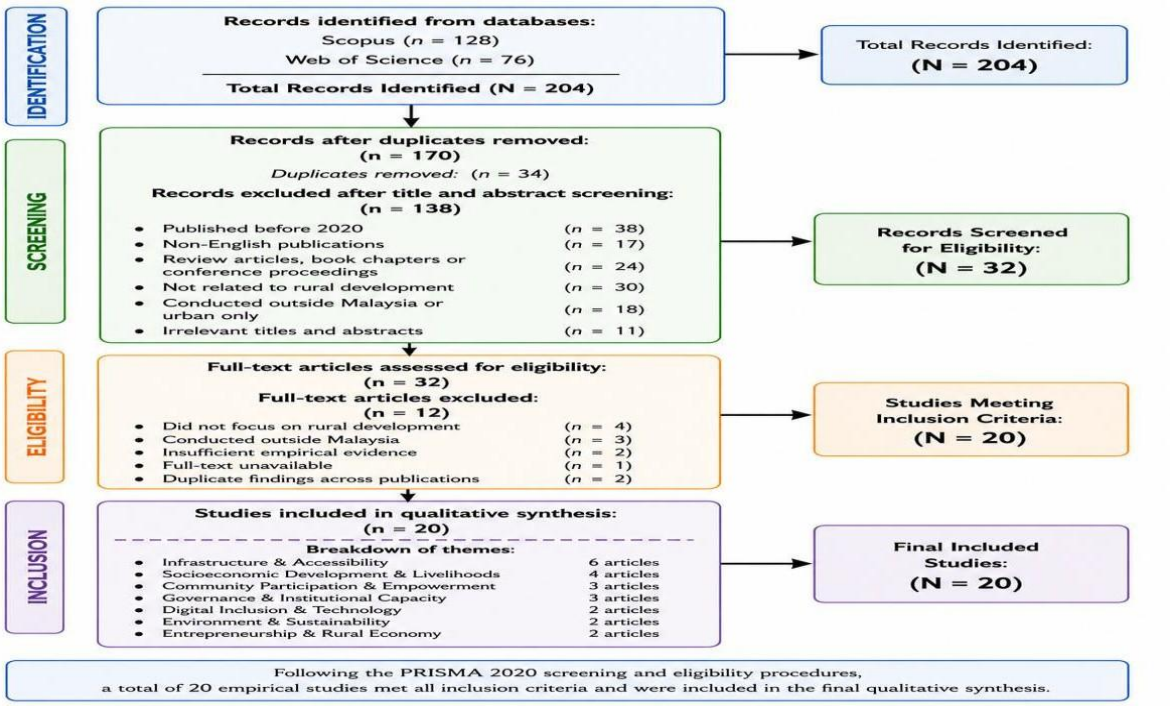


Figure 1: PRISMA 2020 Flow Diagram of the Article Selection Process

Data Analysis and Thematic Synthesis

The extracted data were analysed using a thematic synthesis approach to identify recurring patterns, concepts, and emerging themes across the 20 empirical studies included in this systematic literature review. Thematic synthesis was selected because it provides a systematic and transparent method for integrating findings derived from quantitative, qualitative, and mixed-method research designs. This analytical approach enabled the identification of common challenges, determinants, governance issues, and development strategies related to rural development in Malaysia while allowing evidence from different geographical settings, including Peninsular Malaysia, Sabah, and Sarawak, to be synthesised into meaningful analytical themes.

The thematic analysis was conducted in three sequential stages. First, the findings extracted from each selected study were carefully reviewed and coded according to their research objectives, methodological approaches, principal findings, and key concepts associated with rural development. Similar concepts and recurring issues were subsequently grouped into preliminary categories. During the second stage, these categories were compared across studies to identify similarities, differences, and relationships, enabling broader analytical themes to emerge. Finally, the themes were refined, organised, and interpreted to address the objectives of this systematic review while providing a comprehensive synthesis of the current body of knowledge on rural development in Malaysia.

Based on the thematic synthesis, the findings of the included studies were organised into six major themes, namely (1) Infrastructure and Accessibility, (2) Socioeconomic Development and Rural Livelihoods, (3) Community Participation and Empowerment, (4) Governance and Institutional Capacity, (5) Digital Inclusion and Technology, and (6) Environmental Sustainability and Rural Resilience. Several studies contributed to more than one thematic category because rural development is a multidimensional concept influenced by interconnected economic, social, institutional, environmental, and technological factors. Consequently, the thematic synthesis provided a holistic understanding of the key challenges, determinants, policy implications, and future research directions associated with rural development in Malaysia.

Table 8. Thematic Synthesis Framework

Theme	Description
Theme 1: Infrastructure and Accessibility	Studies examining transportation infrastructure, utilities, public facilities, digital connectivity, and accessibility to essential services that influence rural development.
Theme 2: Socioeconomic Development and Rural Livelihoods	Studies investigating income generation, poverty reduction, employment, education, human capital, and livelihood improvement among rural communities.
Theme 3: Community Participation and Empowerment	Studies focusing on community engagement, local leadership, participatory development, capacity building, and social empowerment.
Theme 4: Governance and Institutional Capacity	Studies examining governance effectiveness, institutional coordination, policy implementation, public service delivery, and administrative capacity.
Theme 5: Digital Inclusion and Technology	Studies exploring broadband connectivity, digital literacy, smart village initiatives, technological innovation, and digital transformation in rural areas.
Theme 6: Environmental Sustainability	Studies addressing sustainable resource management, environmental conservation, climate resilience, and sustainable rural development practices.

RESULTS

Descriptive Analysis of Included Studies

Following the PRISMA 2020 screening process, 20 empirical journal articles published between 2021 and 2026 met all inclusion criteria and were included in the final qualitative synthesis. These studies collectively examined multiple dimensions of rural development in Malaysia, including socioeconomic development, governance, community participation, rural entrepreneurship, infrastructure, digital inclusion, environmental sustainability, and rural livelihoods. The selected studies were conducted across different geographical settings, including Peninsular Malaysia, Sabah, and Sarawak, providing a broad representation of the rural development landscape within the country.

Regarding research methodology, the majority of the included studies adopted quantitative approaches, while several employed qualitative and mixed-method designs. Quantitative studies primarily used questionnaire surveys and statistical analyses to examine relationships among socioeconomic, governance, and development variables. In contrast, qualitative studies utilised interviews, focus group discussions, and case study approaches to provide in-depth insights into rural community experiences, policy implementation, and local development challenges. Mixed-method studies integrated both quantitative and qualitative evidence, enabling a more comprehensive understanding of rural development issues.

The reviewed studies also demonstrated considerable diversity in their research focus. While several studies investigated rural livelihoods, poverty reduction, and socioeconomic wellbeing, others examined infrastructure provision, community participation, institutional governance, digital transformation, entrepreneurship, rural tourism, and environmental sustainability. Since many studies addressed multiple aspects of rural development simultaneously, individual articles contributed to more than one thematic category. This multidisciplinary nature reflects the complexity of rural development and highlights the interconnected relationship between economic growth, governance, community empowerment, technology adoption, and sustainable resource management in achieving inclusive rural transformation in Malaysia. Recent reviews similarly emphasise that infrastructure, governance, services, markets, and environmental assets interact to shape rural development outcomes.

Table 9. Characteristics of the Included Studies

No.	Author(s)	Year	Study Area	Method	Main Focus
1	Abdul Rashid et al.	2021	Malaysia	Quantitative	Modern Rural Development Framework (MRDF)
2	Abdul Malek et al.	2022	Malaysia	Quantitative	Rural youth participation and rural development policy
3	Zakey et al.	2022	Malaysia	Quantitative	Physical facilities and quality of life in rural communities
4	Abdul Rashid et al.	2022	Penang	Quantitative	ICT usage among rural entrepreneurs
5	Ibrahim et al.	2023	Kedah	Quantitative	Livelihood assets and rural household food security
6	Abdul Rashid et al.	2023	Malaysia	Quantitative	Malaysia Assessment Measure for Modern Rural Development (MAMRD)
7	Hazudin et al.	2023	Malaysia	Quantitative	Sustainable rural entrepreneurship and micro-enterprise performance

8	Pimid et al.	2023	Rural Malaysia	Quantitative	Community support for rural tourism development
9	Md Shah et al.	2023	Sabah	Mixed Methods	Poverty eradication programmes and rural development
10	Lam et al.	2023	Pahang	Qualitative	Post-disaster stakeholder governance in rural housing reconstruction
11	Abdul Kadir & Chew	2024	Penang	Mixed Methods	Rural tourism development and Sustainable Development Goals (SDGs)
12	Rashid et al.	2024	Johor	Quantitative	Mega projects and rural transformation
13	Yusoff et al.	2024	Johor	Quantitative	Rural household wellbeing
14	Kasim et al.	2024	Malaysia	Quantitative	Community empowerment and social wellbeing
15	Kamarudin et al.	2024	Kuala Kangsar, Perak	Quantitative	ICT adoption among rural micro-entrepreneurs
16	Shaari et al.	2024	Malaysia	Quantitative	Community support and rural tourism sustainability
17	Hashim et al.	2025	Selangor	Qualitative	Sustainable rural development and community wellbeing
18	Ojukwu & Kamarudin	2022	Malaysia (Malaysia (comparative study)	Qualitative	Rural entrepreneurship and internet utilisation
19	Samsuddin et al.	2021	Malaysia	Quantitative	Digital capabilities and digital literacy among rural communities
20	Samsuddin et al.	2021	Malaysia	Quantitative	Digital reading behaviour and digital inclusion in rural communities

Theme 1: Infrastructure And Accessibility

Infrastructure and accessibility emerged as one of the most frequently discussed themes across the reviewed studies, highlighting their fundamental role in promoting balanced and sustainable rural development in Malaysia. The majority of the included studies consistently emphasised that improvements in transportation networks, public utilities, healthcare facilities, educational institutions, and digital infrastructure have significantly contributed to enhancing socioeconomic wellbeing and reducing development disparities between rural and urban communities. Rural infrastructure was widely recognised as a prerequisite for improving mobility, facilitating access to public services, stimulating economic activities, and increasing the overall quality of life of rural populations. However, several studies also reported that infrastructure development remains uneven across different regions, particularly in remote areas of Sabah and Sarawak, where geographical constraints continue to limit accessibility and service delivery.

Transportation infrastructure was identified as a major determinant influencing rural economic development and community wellbeing. Improved road connectivity facilitates market access, reduces transportation costs, strengthens agricultural supply chains, and increases employment opportunities for rural households. Several studies further demonstrated that improved physical infrastructure positively influences access to education, healthcare, and government services, thereby contributing to poverty reduction and social inclusion.

Nevertheless, disparities in infrastructure quality remain evident between rural communities located near urban centres and those situated in geographically isolated regions. These findings indicate that infrastructure investment should not only focus on physical construction but also prioritise equitable distribution to ensure inclusive regional development throughout Malaysia.

Digital infrastructure has become an increasingly important component of rural development following the rapid expansion of digital technologies and government initiatives promoting digital transformation. Several reviewed studies reported that broadband connectivity, internet accessibility, and digital literacy programmes have improved educational opportunities, entrepreneurial activities, financial inclusion, and public service accessibility among rural communities. Digital technologies also support the adoption of e-commerce, digital agriculture, and online government services, enabling rural residents to participate more actively in the digital economy. Despite these positive developments, inadequate internet coverage, limited digital skills, and affordability constraints continue to restrict digital inclusion in many rural areas. The findings collectively suggest that future rural infrastructure policies should integrate physical infrastructure with digital connectivity to enhance long-term rural resilience, socioeconomic development, and sustainable community wellbeing.

Theme 2: Socioeconomic Development and Rural Livelihoods

Socioeconomic development and rural livelihoods emerged as one of the most dominant themes across the reviewed studies, reflecting the central objective of rural development policies in improving the living standards and economic resilience of rural communities. Most studies consistently reported that rural development initiatives have contributed to income generation, poverty reduction, employment opportunities, and improvements in household wellbeing. However, the evidence also indicates that socioeconomic disparities continue to exist across different regions of Malaysia, particularly between Peninsular Malaysia and the rural areas of Sabah and Sarawak. Variations in employment opportunities, access to productive resources, educational attainment, and market connectivity remain significant challenges that influence rural livelihoods and socioeconomic mobility.

Several studies highlighted that livelihood diversification has become increasingly important in strengthening household resilience against economic uncertainty. While agriculture remains a major source of income for many rural households, increasing numbers of rural residents are diversifying into non-agricultural sectors such as small-scale entrepreneurship, rural tourism, manufacturing, and service-based activities. This diversification has enhanced household income stability, reduced dependence on seasonal agricultural production, and created new employment opportunities, particularly among younger rural populations. Nevertheless, limited access to financial capital, inadequate entrepreneurial skills, and restricted market access continue to constrain the growth of rural enterprises and limit their contribution to long-term socioeconomic development.

The reviewed studies also demonstrated that human capital development plays a critical role in improving rural livelihoods. Investments in education, vocational training, technical skills, and lifelong learning enhance employability, productivity, and entrepreneurial capacity among rural populations. In addition, several studies emphasised that government assistance programmes, rural development agencies, and targeted poverty alleviation initiatives have contributed positively to improving household welfare and reducing income inequality. However, the effectiveness of these programmes varies depending on institutional capacity, local participation, and accessibility. Overall, the findings suggest that sustainable socioeconomic development in rural Malaysia requires integrated strategies that combine employment creation, entrepreneurship development, education, skills enhancement, financial inclusion, and effective institutional support to strengthen rural livelihoods and improve long-term community wellbeing.

Theme 3: Community Participation and Empowerment

Community participation and empowerment emerged as another significant theme across the reviewed studies, highlighting the importance of local engagement in achieving sustainable rural development. The majority of the included studies indicated that development initiatives are more effective when rural communities actively participate in planning, implementation, monitoring, and evaluation processes. Rather than functioning solely as beneficiaries of government programmes, rural residents increasingly serve as key stakeholders whose

knowledge, experiences, and local resources contribute to more responsive and sustainable development outcomes. Community participation also strengthens local ownership of development projects, thereby improving programme sustainability and increasing public trust in development institutions.

Several studies further emphasised that community empowerment extends beyond participation in development activities and includes strengthening local leadership, improving decision-making capacity, and enhancing social capital. Community-based organisations, village committees, cooperatives, and local development associations were identified as important platforms for encouraging collaboration among government agencies, non-governmental organisations, and rural residents. These collaborative arrangements facilitate knowledge sharing, capacity building, and collective problem-solving, enabling rural communities to respond more effectively to socioeconomic and environmental challenges. In addition, the reviewed studies reported that stronger social networks and community cohesion contribute positively to resilience, particularly in addressing poverty, unemployment, and limited access to public services.

The findings also suggest that community empowerment is closely associated with inclusive governance and sustainable development. Several studies reported that rural development programmes achieve better outcomes when local communities are involved in decision-making processes from the early planning stages rather than only during implementation. Inclusive participation enables development initiatives to better reflect local priorities, cultural values, and socioeconomic needs while improving accountability and transparency. Nevertheless, some studies identified barriers such as limited leadership capacity, unequal participation among community members, and insufficient institutional support, which continue to restrict the effectiveness of participatory development. Overall, the evidence indicates that strengthening community participation and empowerment is essential for promoting inclusive, resilient, and people-centred rural development in Malaysia.

Theme 4: Governance And Institutional Capacity

Governance and institutional capacity emerged as one of the most influential themes across the reviewed studies, highlighting their critical role in determining the effectiveness and sustainability of rural development initiatives in Malaysia. The majority of the included studies reported that successful rural development depends not only on financial investment but also on effective governance structures, strong institutional coordination, transparent decision-making, and efficient policy implementation. Government agencies at the federal, state, and local levels were consistently identified as key actors responsible for planning, coordinating, and monitoring rural development programmes. The findings indicate that well-coordinated institutional arrangements contribute significantly to improving service delivery, infrastructure development, poverty alleviation, and community wellbeing.

Several studies further emphasised the importance of inter-agency collaboration in addressing the multidimensional nature of rural development. Rural development programmes often involve multiple government ministries, local authorities, development agencies, educational institutions, and community-based organisations. Effective collaboration among these stakeholders enables better resource allocation, reduces duplication of development efforts, and facilitates integrated policy implementation. Conversely, weak institutional coordination, fragmented governance structures, overlapping responsibilities, and limited administrative capacity were identified as major barriers that reduce programme effectiveness and delay development outcomes. These institutional weaknesses were found to be more pronounced in geographically remote rural areas, where administrative and logistical challenges remain significant.

The reviewed studies also highlighted the importance of good governance principles, including transparency, accountability, stakeholder participation, and evidence-based policy formulation. Development initiatives that actively incorporated local community feedback and regularly monitored programme performance were generally associated with better socioeconomic outcomes and higher public confidence. Nevertheless, several studies identified continuing challenges related to bureaucratic inefficiencies, limited institutional resources, inconsistent policy implementation, and inadequate monitoring and evaluation mechanisms. Overall, the findings suggest that strengthening governance quality and institutional capacity is essential for ensuring that rural development policies are implemented effectively, resources are utilised efficiently, and development benefits are distributed equitably across rural communities in Malaysia.

Theme 5: Digital Inclusion and Technology

Digital inclusion and technology emerged as a prominent theme across the reviewed studies, reflecting the increasing importance of digital transformation in advancing rural development in Malaysia. The reviewed studies consistently indicated that digital technologies have expanded opportunities for education, entrepreneurship, communication, financial services, and public service delivery within rural communities. Government initiatives aimed at improving broadband infrastructure, expanding internet accessibility, and promoting digital literacy have significantly contributed to narrowing the digital divide between rural and urban areas. Nevertheless, the findings also revealed that digital development remains uneven, with considerable disparities in internet coverage and technological accessibility across different rural regions, particularly in remote areas of Sabah and Sarawak.

Several studies highlighted that digital technologies have become important drivers of rural economic development by supporting entrepreneurship, agricultural innovation, and market expansion. The increasing use of e-commerce platforms, digital payment systems, online marketing, and social media has enabled rural entrepreneurs to access wider markets and diversify their income sources. Similarly, digital technologies have enhanced agricultural productivity through improved access to weather information, market prices, farming knowledge, and precision agriculture practices. Despite these positive developments, many studies identified barriers including inadequate digital infrastructure, limited digital skills, affordability constraints, and low levels of technology adoption among older rural populations. These challenges continue to restrict the full utilisation of digital opportunities and limit the contribution of technology to sustainable rural development.

The reviewed studies further demonstrated that digital inclusion extends beyond internet access and requires comprehensive investments in digital competencies, institutional support, and lifelong learning. Successful digital transformation depends not only on expanding broadband infrastructure but also on strengthening digital literacy, improving technological confidence, and creating supportive ecosystems that encourage innovation among rural communities. Several studies also reported that collaboration between government agencies, educational institutions, telecommunications providers, and local communities is essential for ensuring equitable digital access and reducing regional disparities. Overall, the findings suggest that digital inclusion should be regarded as a strategic pillar of rural development policy, capable of enhancing economic competitiveness, improving public service accessibility, promoting social inclusion, and strengthening the long-term resilience of rural communities in Malaysia.

Theme 6: Environmental Sustainability and Rural Resilience

Environmental sustainability and rural resilience emerged as an increasingly important theme within the reviewed studies, reflecting the growing recognition that rural development should balance economic growth with environmental conservation and long-term sustainability. While earlier rural development policies primarily focused on improving infrastructure, agricultural productivity, and poverty reduction, recent studies demonstrate a gradual transition towards sustainable resource management, climate adaptation, and environmentally responsible development practices. The reviewed literature consistently suggests that sustainable rural development requires integrated approaches that simultaneously strengthen economic resilience, environmental protection, and community wellbeing.

Several studies highlighted that rural communities are increasingly vulnerable to environmental challenges, including climate change, floods, droughts, land degradation, biodiversity loss, and unsustainable natural resource exploitation. These environmental pressures directly affect agricultural productivity, food security, household income, and community livelihoods. Consequently, sustainable agricultural practices, environmental conservation programmes, renewable energy adoption, and natural resource management have become essential components of contemporary rural development strategies. The reviewed studies further indicated that integrating environmental considerations into rural planning enhances community resilience while supporting long-term socioeconomic development.

The findings also emphasised that environmental sustainability depends on effective governance, community participation, and institutional collaboration. Several studies reported that environmentally sustainable rural development is more likely to succeed when government agencies, local communities, educational institutions, and private sector organisations work collectively to promote environmental awareness, sustainable land management, and climate adaptation initiatives. However, challenges remain, including limited financial resources, insufficient environmental education, weak institutional coordination, and inconsistent policy implementation. Overall, the reviewed evidence suggests that future rural development policies should adopt a holistic sustainability framework that integrates economic development, environmental stewardship, social inclusion, and institutional capacity to strengthen the long-term resilience of rural communities in Malaysia.

DISCUSSION

The findings of this systematic literature review demonstrate that rural development in Malaysia has evolved into a multidimensional development agenda that extends beyond traditional objectives of agricultural productivity and poverty alleviation. Across the 20 reviewed studies, six major themes were identified: infrastructure and accessibility, socioeconomic development and rural livelihoods, community participation and empowerment, governance and institutional capacity, digital inclusion and technology, and environmental sustainability and rural resilience. These themes collectively indicate that successful rural development depends on the integration of physical infrastructure, economic opportunities, effective governance, technological advancement, and sustainable resource management. This finding supports the Sustainable Livelihoods Framework, which emphasises that sustainable development outcomes can only be achieved through the interaction of multiple forms of capital, including physical, human, social, financial, and institutional assets.

Another important finding is that socioeconomic progress is increasingly associated with livelihood diversification, human capital development, community participation, and digital transformation. While government initiatives have improved infrastructure, connectivity, and access to public services, the reviewed studies consistently identified persistent regional disparities, particularly in remote rural areas where access to digital infrastructure, financial resources, and employment opportunities remains limited. Furthermore, the findings suggest that community participation and institutional collaboration are essential for improving policy implementation and ensuring that development initiatives reflect local needs. These observations are consistent with Community Development Theory and Institutional Theory, which argue that sustainable development is more effective when local stakeholders actively participate in decision-making and when institutions collaborate efficiently to deliver development programmes.

Finally, the review highlights the increasing importance of environmental sustainability and resilience within Malaysia's rural development agenda. Recent studies demonstrate that climate change, environmental degradation, and natural resource management have become integral considerations in rural policy, requiring development strategies that balance economic growth with environmental protection. Collectively, the reviewed evidence suggests that future rural development policies should adopt a holistic and integrated approach that simultaneously strengthens infrastructure, governance, digital inclusion, community empowerment, and environmental sustainability. Such an approach will enhance the resilience and competitiveness of rural communities while contributing to the achievement of the Sustainable Development Goals (SDGs) and Malaysia's long-term rural development aspirations.

Pratical Implications

The findings of this systematic literature review provide several important implications for policymakers, practitioners, and rural development agencies in Malaysia. First, rural development policies should adopt a more integrated approach that simultaneously addresses infrastructure development, socioeconomic advancement, digital inclusion, environmental sustainability, and institutional strengthening rather than implementing isolated sector-specific initiatives. Greater coordination among federal, state, and local government agencies is essential to improve policy implementation, reduce duplication of resources, and ensure that development programmes effectively address the diverse needs of rural communities.

Second, the findings emphasise the importance of strengthening human capital and community participation in rural development planning. Investments in education, vocational training, entrepreneurship, and digital literacy should continue to be prioritised to improve employment opportunities, enhance household resilience, and increase community capacity to participate in local development initiatives. Policymakers should also encourage participatory governance by involving local communities in planning, implementation, and monitoring processes to ensure that development programmes are responsive to local priorities and sustainable over the long term.

Finally, the review highlights the need to integrate digital transformation and environmental sustainability into future rural development strategies. Expanding broadband infrastructure, improving digital accessibility, and promoting technological innovation can enhance economic competitiveness and public service delivery in rural areas. At the same time, environmental conservation, climate adaptation, and sustainable resource management should be incorporated into development planning to strengthen the resilience of rural communities against future environmental and socioeconomic challenges. Collectively, these strategies will contribute to achieving balanced, inclusive, and sustainable rural development in Malaysia.

Limitations of the Study

This systematic literature review has several limitations that should be acknowledged. First, the review relied exclusively on published empirical studies retrieved from the Scopus and Web of Science databases. Consequently, unpublished reports, government documents, policy papers, conference proceedings, dissertations, and other forms of grey literature were excluded, potentially limiting the comprehensiveness of the evidence base. Second, the review synthesised only secondary data and did not incorporate primary empirical evidence, such as surveys, interviews, or case studies, to validate the identified findings and themes. Therefore, the conclusions should be interpreted as evidence derived from the existing literature rather than direct observations of rural communities. Third, the review focused specifically on Malaysia, providing context-specific insights into rural development but limiting the generalisability of the findings to other developing countries with different socioeconomic, political, and institutional contexts. In addition, although the included studies represented various regions within Malaysia, including Peninsular Malaysia, Sabah, and Sarawak, regional disparities remain underexplored because of differences in study coverage and methodological approaches. Finally, the review adopted a qualitative thematic synthesis and did not employ quantitative meta-analysis or bibliometric analysis. Consequently, it was not possible to statistically examine the strength of relationships among variables, research trends, or collaboration networks. Furthermore, emerging technologies such as artificial intelligence (AI), precision agriculture, the Internet of Things (IoT), digital finance, and smart village initiatives received relatively limited attention in the reviewed literature, indicating important gaps that warrant further investigation.

Future Research Directions

Future research should complement systematic literature reviews with primary empirical investigations, including surveys, interviews, focus group discussions, and case studies involving rural households, community leaders, entrepreneurs, policymakers, and development agencies. Such approaches would provide richer contextual insights and enable validation of the findings identified through secondary literature. Comparative studies between Malaysia and neighbouring developing countries, such as Indonesia, Thailand, Vietnam, and India, are also recommended to identify transferable best practices, institutional innovations, and policy approaches that support sustainable rural development under different socioeconomic and governance contexts. Within Malaysia, future research should further examine regional disparities across Peninsular Malaysia, Sabah, and Sarawak, as well as between individual states, to identify location-specific challenges, development priorities, and policy interventions tailored to local needs. In addition, greater attention should be devoted to evaluating the impacts of emerging digital technologies, including artificial intelligence (AI), precision agriculture, Internet of Things (IoT) applications, e-commerce, financial technology (fintech), digital entrepreneurship, and smart village initiatives on rural livelihoods, governance, agricultural productivity, and community resilience. Finally, future studies should consider applying quantitative approaches such as meta-analysis and bibliometric analysis alongside systematic reviews to strengthen the evidence base, identify research trends, measure relationships among key variables, and provide more robust evidence for policymakers and practitioners.

CONCLUSION

This systematic literature review synthesised recent empirical evidence on rural development in Malaysia by reviewing 20 studies published between 2021 and 2026. The review identified six major themes that shape contemporary rural development: infrastructure and accessibility, socioeconomic development and rural livelihoods, community participation and empowerment, governance and institutional capacity, digital inclusion and technology, and environmental sustainability and rural resilience. Collectively, these themes demonstrate that rural development has evolved from a narrow focus on agricultural and poverty-related interventions towards a comprehensive and integrated approach that addresses economic, social, institutional, technological, and environmental dimensions of development.

The review further highlights that sustainable rural development cannot be achieved through infrastructure investment alone. Instead, long-term development requires effective governance, active community participation, strengthened human capital, digital transformation, and environmentally sustainable development strategies. Although Malaysia has made significant progress in improving rural living standards, persistent regional disparities and emerging socioeconomic and environmental challenges indicate that continued policy innovation and inter-agency collaboration remain essential. These findings provide a comprehensive synthesis of the current literature and offer valuable insights for policymakers, practitioners, and researchers seeking to enhance rural development planning and implementation.

Overall, this review contributes to the growing body of knowledge on rural development by consolidating recent empirical evidence and identifying key priorities for future research and policy. By adopting a holistic and evidence-based approach, future rural development initiatives can better promote inclusive growth, strengthen community resilience, and support the achievement of Malaysia's long-term development aspirations and the Sustainable Development Goals (SDGs).

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