

Development of Policy Proposals for Economic, Social, and Environmental Development in Thailand: A Case Study of the Provincial Economic Development Zone in Maha Sarakham

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Abstract

This article examines the spatial development process of Maha Sarakham Province through the analysis of policy integration, spatial governance, and the economic, social, and environmental dimensions of provincial development. The article argues that the development of provincial economic development zones in Maha Sarakham can be sustained effectively only through collaborative governance mechanisms that integrate universities, public agencies, local communities, and place-based development strategies within the context of a knowledge-based economy. The analysis demonstrates that Maha Sarakham has evolved into an “Education City” that functions as a regional hub for human capital, knowledge production, and service-sector expansion. In the policy

dimension, provincial development has increasingly emphasized integrated area-based governance and cross-sector collaboration. In the economic dimension, the concentration of educational institutions has stimulated service industries, creative economies, local enterprises, and OTOP-related activities. In the social dimension, cooperation among universities, government agencies, and community networks has strengthened community participation, local capacity-building, and knowledge transfer processes. In the environmental dimension, spatial development initiatives have promoted sustainable agricultural practices, cultural tourism, and greater awareness of resource management at the local level. Nevertheless, the analysis also identifies several structural constraints, including fragmented coordination mechanisms, budget limitations, uneven spatial development, and the continued dependence of the provincial economy on the student population and public-sector activities. These conditions indicate the need for a more adaptive and collaborative provincial governance model capable of balancing economic growth, social inclusion, and environmental sustainability. The article contributes to the literature on area-based development and provincial economic governance by proposing a contextualized framework for knowledge-based provincial development in Thailand.

Keywords: Policy, Development, Economic, Social, Environmental

Introduction

Contemporary national development is increasingly shaped by complex interactions among economic transformation, social inequality, environmental degradation, and rapid technological change (Adanma &

Ogunbiyi, 2024). Under the conditions of globalization and intensifying international competition, many countries face mounting pressures to enhance economic competitiveness while simultaneously addressing social disparities and ecological sustainability (Worapongpat, 2026d). In response to these challenges, development paradigms have gradually shifted from centralized growth-oriented models toward area-based development approaches that emphasize spatial integration, local capacities, and collaborative governance mechanisms linking national policy frameworks with local realities.

Within this context, provincial economic development zones have emerged as an important policy instrument for strengthening place-based competitiveness and promoting sustainable regional development (Basheer et al., 2022). Such an approach highlights the significance of cooperation among government agencies, academic institutions, private-sector actors, and civil society organizations through participatory governance structures and integrated policy coordination. In Thailand, these issues have become increasingly significant due to persistent structural challenges, including regional inequality, dependence on resource-based economic activities, environmental pressures, and uneven access to technological and educational opportunities. These conditions have reinforced the need for provincial-level development strategies capable of balancing economic growth, social inclusion, and environmental sustainability within specific spatial contexts.

Despite the growing policy emphasis on area-based development in Thailand, existing studies have predominantly focused on industrial development zones, special economic zones, or macroeconomic policy

frameworks, while comparatively limited attention has been paid to provincial economic development zones rooted in knowledge-based and education-centered local economies. (Basiago, 1998). Furthermore, previous studies often prioritize descriptive policy analysis without sufficiently examining the governance mechanisms, structural constraints, and collaborative processes that shape provincial development outcomes. This gap is particularly evident in provinces characterized by hybrid economic structures that combine service-based, educational, agricultural, and community economies.

Maha Sarakham Province represents a distinctive and academically significant case within this context. The province functions as an Education City due to the concentration of higher education institutions, research centers, and human capital networks that play a major role in shaping local economic and social dynamics. Simultaneously, the province remains dependent on agriculture, small-scale enterprises, and community-based economic activities (Worapongpat, 2026c). This coexistence of a knowledge-based economy and a resource-based local economy creates both opportunities and structural limitations for long-term provincial development. While the educational sector contributes to the expansion of service industries, creative economic activities, and local innovation systems the province continues to face challenges related to rural–urban disparities, unstable agricultural incomes, demographic change, dependence on student populations, and unequal access to infrastructure and technological resources.

This article argues that the governance of provincial economic development zones in Maha Sarakham can achieve long-term sustainability

only through collaborative and area-based governance mechanisms that integrate educational institutions, local communities, public agencies, and development networks within a knowledge-based economic framework. (Burbridge et al., 2001). This position differs from conventional development approaches that primarily emphasize infrastructure investment or industrial expansion as the principal drivers of provincial competitiveness. Instead, the article contends that the distinctive spatial identity of Maha Sarakham as an education-centered province requires a governance model that prioritizes knowledge integration, participatory policy coordination, and socially inclusive development strategies.

Accordingly, this article has three principal objectives: (1) to analyze the governance processes and institutional arrangements associated with provincial economic development zones in the context of Maha Sarakham Province; (2) to examine the structural problems, operational limitations, and spatial inequalities affecting provincial development management; and (3) to propose policy recommendations aimed at strengthening competitiveness, social sustainability, and environmental security through collaborative area-based governance mechanisms.

To achieve these objectives, the article employs an analytical framework integrating three interrelated perspectives: (1) area-based development; (2) collaborative and network governance; and (3) sustainable development within the framework of the Sustainable Development Goals (SDGs). These perspectives are examined in relation to Thailand's 13th National Economic and Social Development Plan and the 20-Year National Strategy, both of which emphasize balanced development, competitiveness enhancement, social equity, and environmental sustainability.

For conceptual clarity, this article defines a provincial economic development zone as a spatially defined development area designed to promote economic, social, and environmental development through integrated governance mechanisms and multi-stakeholder collaboration among government agencies, academic institutions, private-sector organizations, and civil society networks. This definition is consistent with the principles of collaborative governance and network governance, which emphasize policy integration, participatory management, and inter-organizational coordination (Worapongpat, 2026a).

The article contributes to the literature in three principal ways. First, it advances understanding of area-based development within the provincial context of Thailand, particularly in relation to education-centered economies. (Gale, 1992). Second, it proposes a contextualized governance perspective for provincial economic development zones that differs from industrial-oriented development models commonly discussed in existing scholarship. Third, it provides policy recommendations applicable to provincial and regional planning practices aimed at strengthening sustainable and knowledge-based local development.

1. Spatial Context and Development Potential of Maha Sarakham Province

1.1 General Context of the Province

Maha Sarakham Province is situated in the central part of Northeastern Thailand within the Khorat Plateau region. Its physical geography is characterized predominantly by upland plains consisting of medium-sized urban communities surrounded by extensive rural areas that

remain largely dependent on agriculture as the principal livelihood. (Worapongpat, 2025e). The province occupies an important strategic position within the regional transportation and educational network of Northeastern Thailand and has increasingly developed a distinctive spatial identity as an Education City due to the concentration of higher education institutions, vocational colleges, and research-oriented organizations located within the province. The expansion of educational institutions has significantly contributed to the accumulation of human capital, the growth of knowledge-intensive activities, and the transformation of urban economic structures. (Gallego, 2006).

In particular, the continuous inflow of students, academic personnel, and related service workers has stimulated urban expansion and generated increasing demand for accommodation, transportation, retail trade, food services, and digital-related businesses. (Worapongpat, 2025d). This process has gradually shifted parts of the provincial economy from a predominantly agriculture-based structure toward a mixed economy combining educational services, urban consumption, and local entrepreneurial activities. (Mahasarakham University, 2022).

Nevertheless, despite the province's emerging role as a regional knowledge hub, rural communities in many districts continue to experience structural limitations associated with unstable agricultural incomes, labor migration, demographic aging, and uneven access to infrastructure and technological resources. (Hariram et al., 2023). This coexistence between an expanding knowledge-based urban economy and a traditional rural agricultural economy represents a defining characteristic of Maha Sarakham's spatial development pattern. It also reflects the broader challenge of

balancing economic modernization with socially inclusive and territorially balanced development within provincial governance systems.

From an area-based development perspective, Maha Sarakham demonstrates a distinctive form of provincial development in which educational institutions function not only as centers of learning but also as economic anchors and governance actors within local development networks. (Worapongpat, 2025c). This condition differs from conventional provincial economic zones in Thailand that are primarily driven by industrial manufacturing or border trade activities. Consequently, the spatial development of Maha Sarakham requires governance mechanisms capable of integrating educational institutions, local communities, public agencies, and civil society organizations into collaborative development processes responsive to local socioeconomic conditions. (Maha Sarakham Provincial Office, 2023).

1.2 Economic Potential and Competitiveness

The economic structure of Maha Sarakham Province is primarily based on agriculture, education, wholesale and retail trade, and service-sector activities. In recent years, the provincial economy has demonstrated a gradual increase in the contribution of the service sector to Gross Provincial Product (GPP) largely resulting from the province's role as a regional educational center attracting a substantial student population from surrounding provinces. (Hezri & Nordin Hasan, 2006). Simultaneously, urban areas within the province have experienced the expansion of small and medium-sized enterprises (SMEs), creative economy activities, and digitally connected service businesses, reflecting broader regional transitions toward

a knowledge-based economy. (Maha Sarakham Provincial Statistical Office, 2023).

Table 1

Number of Small and Medium-Sized Enterprises (SMEs) by Type of Economic Activity in Maha Sarakham Province, 2022

Type of Economic Activity	Number of Enterprises	Share (%)
Education and Related Services	1,245	38.2
Wholesale and Retail Trade	1,025	31.5
Agro-processing and Food Production	640	19.7
Others	350	10.7
Total	3,260	100.0

Note. Adapted from Office of Small and Medium Enterprises Promotion (OSMEP, 2023).

Analysis of Table 1

The data presented in Table 1 indicate that education and related service enterprises account for the largest proportion of SMEs in Maha Sarakham Province, representing 38.2 percent of all registered enterprises. This finding demonstrates that the province's educational function has evolved beyond a purely academic role and has become a major economic driver shaping urban commercial activities and local service-sector expansion. (Office of the National Economic and Social Development Council (Office of the National Economic and Social Development Council [NESDC], 2018). Businesses such as accommodation services, restaurants, bookstores, tutoring centers, transportation services, and digital-related

enterprises have increasingly developed in response to the demands generated by the student population and academic workforce.

This economic structure suggests that Maha Sarakham possesses characteristics of a localized knowledge-based economy in which educational institutions operate as anchor institutions influencing patterns of consumption, employment generation, and urban economic circulation. However, this dependence on the education sector also creates structural vulnerabilities. (Worapongpat, 2025b). Economic activities concentrated around student populations may become highly sensitive to demographic decline, educational policy changes, or shifts toward online learning systems. Consequently, the long-term competitiveness of the province cannot rely solely on educational consumption but must diversify toward innovation-oriented industries, creative economies, and locally embedded entrepreneurship.

Meanwhile, agro-processing and food production enterprises account for 19.7 percent of total SMEs, reflecting the continued importance of agriculture and resource-based economic activities within the province (Islam, 2025). This coexistence between knowledge-based urban services and agricultural production illustrates the province's dual economic structure, which simultaneously creates opportunities and policy challenges for provincial governance. On the one hand, the educational sector can support technological transfer, agricultural innovation, and community-based entrepreneurship. On the other hand, uneven development between urban and rural areas may intensify spatial inequality if development policies remain concentrated primarily in municipal zones.

From a policy perspective, these findings indicate that provincial economic development strategies in Maha Sarakham should emphasize integrated area-based governance capable of linking universities, local communities, SMEs, agricultural networks, and public institutions into collaborative development systems. (Worapongpat, 2025a). Such an approach would enhance the province's adaptive capacity while promoting balanced economic growth, social inclusion, and long-term sustainability within the provincial development framework.

2. Current Conditions and Structural Characteristics of Maha Sarakham Province

2.1 Spatial Context and Physical Geography

The geographical characteristics of Maha Sarakham Province constitute a significant structural foundation influencing its economic activities, settlement patterns, resource management systems, and long-term spatial development dynamics (Jie et al., 2023). The province is located within the central Chi River Basin of Northeastern Thailand and is characterized predominantly by undulating plateau landscapes with average elevations ranging between approximately 130 and 180 meters above mean sea level. These physical conditions have shaped spatial differentiation in agricultural production, settlement distribution, transportation networks, and public infrastructure development across the province.

The province's land-use structure remains heavily associated with agricultural activities, particularly rice cultivation and cash-crop production in rural districts, while urban and semi-urban areas increasingly function as administrative, educational, and commercial centers. (Panayotou, 1993). This

spatial configuration reflects the coexistence of traditional agricultural systems alongside expanding urban service economies. Such a pattern illustrates how geographical conditions continue to influence both the opportunities and limitations of provincial economic development.

From a climatic perspective, Maha Sarakham Province is influenced by the tropical monsoon system and experiences three principal seasons: summer, rainy season, and winter (Runhaar et al., 2006). Average annual rainfall ranges from approximately 1,300 to 1,600 millimeters, although rainfall distribution often remains uneven across seasons and districts. These climatic conditions directly affect agricultural productivity, water availability, and local livelihood stability. Periodic droughts and irregular rainfall patterns have increasingly generated concerns regarding water security, agricultural risk management, and environmental sustainability within the province.

Importantly, the physical and climatic characteristics of Maha Sarakham should not be regarded merely as descriptive geographical background (Singh et al., 2021). Rather, they constitute structural spatial conditions that shape provincial development trajectories and policy choices. The dependence of many rural communities on climate-sensitive agricultural activities increases vulnerability to environmental fluctuations and economic instability. At the same time, the province's relatively centralized settlement structure and expanding urban service sector create opportunities for more integrated spatial planning and area-based development strategies.

From an analytical perspective, these conditions suggest that provincial development policies cannot rely exclusively on conventional economic growth approaches focused solely on urban expansion or

industrial investment. (Stern, 2015). Instead, effective provincial governance in Maha Sarakham requires integrated spatial management capable of balancing agricultural sustainability, urban growth, environmental resilience, and infrastructure development. This need is particularly important in the context of climate uncertainty and increasing socioeconomic disparities between urban and rural areas within the province.

2.2 Demographic Structure, Social Conditions, and Human Capital Development

The demographic structure of Maha Sarakham Province reflects considerable socioeconomic complexity and constitutes a critical factor shaping provincial development capacity and governance challenges. The province has an average population density of approximately 158 persons per square kilometer, which is relatively high compared with many provinces in Northeastern Thailand. Population concentration is especially evident within the central districts, where educational institutions, commercial activities, public services, and administrative functions are heavily clustered.

This concentration of population and services has contributed to the emergence of urban-centered economic activities while simultaneously generating disparities between municipal areas and peripheral rural communities. (Strezov et al., 2017). Urban districts benefit from greater access to education, healthcare services, transportation systems, and digital infrastructure, whereas several rural areas continue to experience limitations in public service accessibility and economic opportunities. Consequently, spatial inequality remains an important structural issue within provincial development planning.

Another major demographic trend is the province's transition toward an aging society. Individuals aged 60 years and above account for approximately 19 percent of the total population, reflecting demographic changes occurring throughout Thailand. (Office of Small and Medium Enterprises Promotion (OSMEP), 2023). This transition has substantial implications for provincial governance, particularly in relation to healthcare systems, labor-force sustainability, social welfare provision, and long-term public expenditure planning. The aging population also raises concerns regarding the future productivity of the agricultural sector, labor shortages in rural communities, and increased dependency ratios within local households.

At the same time, Maha Sarakham Province possesses a distinctive demographic advantage through its role as a regional education hub. The presence of major universities, vocational institutions, and secondary educational facilities continuously attracts student populations from neighboring provinces and other regions of Thailand (Sun & Cui, 2018). This pattern of education-driven migration has significantly influenced local demographic composition and urban economic development.

The influx of students and academic personnel has stimulated the expansion of housing markets, transportation systems, retail trade, food services, digital businesses, and various forms of urban service-sector activities. (Program Management Unit on Area-Based Development (PMU-A), 2022). More importantly, educational institutions have increasingly functioned not only as centers of learning but also as strategic actors within local development networks through research activities, community engagement, and human capital formation. These dynamics have

contributed to the gradual emergence of a localized knowledge-based economy within the province.

However, this development pattern also produces structural vulnerabilities. The provincial economy remains heavily dependent on educational activities and student populations, making local economic circulation potentially sensitive to demographic decline, changing educational policies, or shifts toward online learning systems. Furthermore, while universities contribute significantly to knowledge production and urban economic growth, the benefits of these processes are not always distributed evenly across rural communities. (Vetterlein, 2007). This situation highlights the challenge of ensuring that human capital development contributes to inclusive and territorially balanced provincial development rather than reinforcing existing spatial inequalities.

Based on the foregoing analysis, Maha Sarakham Province demonstrates strengths that extend beyond the conventional agricultural profile commonly associated with many provinces in Northeastern Thailand (Office of the National Economic and Social Development Council (NESDC) 2022) The province increasingly functions as a center of human capital development, educational services, and knowledge-based economic activities. These structural characteristics provide important foundations for the development of provincial economic development zone policies grounded in collaborative governance, area-based planning, and sustainable local development.

New Knowledge Contribution

Based on the analysis of provincial economic development zone governance in Maha Sarakham Province across economic, social, and environmental dimensions, this article synthesizes a new body of knowledge through the development of a Causal–Structural–Outcome Model of Provincial Area-Based Governance. The proposed framework explains how spatial development in Maha Sarakham emerges from the interaction between structural drivers, governance arrangements, operational mechanisms, and sustainability-oriented development outcomes. This synthesized framework is presented conceptually in Figure 1.

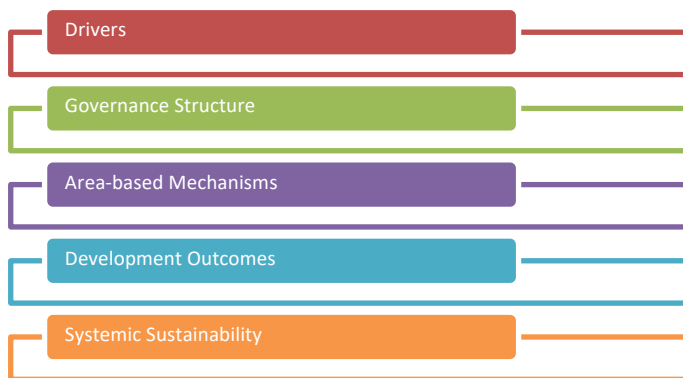


Figure 1 *New Knowledge Framework on the Development Structure of the Provincial Economic Development Zone in Maha Sarakham Province*

Conceptual Explanation and Analytical Synthesis

As illustrated in Figure 1, the development structure of the provincial economic development zone in Maha Sarakham Province can be

conceptualized as an interconnected and dynamic system composed of five interrelated components.

1. Drivers The first component consists of structural drivers that shape the trajectory of provincial development. These include demographic structure, educational concentration, infrastructure systems, national development strategies, and macro-level policy frameworks. In the context of Maha Sarakham Province, the concentration of higher education institutions and the expansion of education-related services function as distinctive drivers differentiating the province from conventional industrial-oriented economic zones. At the same time, agricultural dependency, demographic aging, and spatial inequality continue to operate as structural constraints influencing development capacity and governance priorities.

2. Governance Structure

The second component concerns governance structures involving local administrative organizations, provincial authorities, central government agencies, universities, private-sector actors, and community organizations. The analysis demonstrates that provincial economic development cannot be managed effectively through fragmented administrative mechanisms alone. Rather, governance effectiveness depends on the ability of institutions to coordinate policies, share resources, and establish collaborative decision-making systems across organizational boundaries.

This finding contributes to the literature on collaborative governance by demonstrating that universities in Maha Sarakham function not only as educational institutions but also as strategic governance actors within provincial development networks. Their role extends to knowledge

production, policy support, community engagement, and local economic stimulation.

3. Area-based Mechanisms

The third component comprises area-based operational mechanisms that translate policy objectives into practical development processes. These mechanisms include inter-organizational collaboration, integrated planning systems, resource allocation processes, local data management, and policy coordination instruments. The analysis indicates that successful area-based governance depends not only on policy formulation but also on the operational capacity to connect actors, institutions, and spatial resources within specific local contexts.

Importantly, the study finds that provinces characterized by hybrid economies, such as Maha Sarakham, require adaptive governance mechanisms capable of simultaneously supporting agricultural development, urban services, educational economies, and community enterprises. This condition differs substantially from governance models designed primarily for industrial economic zones.

4. Development Outcomes

The fourth component involves multidimensional development outcomes encompassing economic, social, and environmental dimensions. Economically, the development of educational and service sectors contributes to employment generation, SME expansion, and urban economic circulation. Socially, collaboration between universities, communities, and public agencies enhances human capital development, local participation, and knowledge transfer processes. Environmentally, area-based development mechanisms encourage greater attention to sustainable

agriculture, local resource management, and environmentally sensitive tourism activities.

However, the analysis also demonstrates that development outcomes remain unevenly distributed across spatial areas within the province. Urban-centered growth associated with educational institutions tends to generate stronger economic benefits in municipal areas, while several rural communities continue to face structural vulnerabilities related to agricultural instability and limited infrastructure access. This finding highlights the importance of territorially balanced development strategies within provincial governance systems.

5. Systemic Sustainability

The final component concerns systemic sustainability, representing the long-term capacity of provincial governance systems to maintain balance among economic competitiveness, social inclusion, and environmental resilience. The study argues that sustainability at the provincial level cannot be understood solely in terms of economic growth indicators. Instead, sustainable provincial development depends on institutional adaptability, collaborative governance capacity, and the integration of knowledge-based development with local socioeconomic conditions.

In the case of Maha Sarakham Province, sustainability is closely associated with the province's ability to diversify beyond dependence on student populations and public-sector activities while strengthening innovation-oriented local economies and inclusive development networks. This requires governance systems capable of integrating educational institutions, agricultural communities, SMEs, and public agencies into long-term development partnerships.

Theoretical and Policy Contribution

The newly synthesized framework contributes to the literature on area-based development and provincial governance in three important ways.

First, the framework reconceptualizes provincial economic development zones as integrated governance systems rather than merely economic management areas. This perspective expands existing approaches that primarily emphasize infrastructure investment or industrial competitiveness.

Second, the study introduces the concept of an “education-centered provincial development model,” demonstrating how educational institutions can function as anchor institutions shaping economic structures, governance networks, and spatial development trajectories at the provincial level.

Third, the framework highlights the importance of institutional integration, data and knowledge management, and stakeholder participation as core conditions for sustainable area-based governance. These findings provide practical implications for the formulation of provincial development policies in Thailand, particularly for provinces characterized by mixed economies combining agricultural, educational, and service-sector activities.

Accordingly, this newly synthesized body of knowledge offers both a conceptual foundation and a policy-oriented framework applicable not only to Maha Sarakham Province but also to other provincial economic development zones seeking to achieve balanced, inclusive, and sustainable development under conditions of socioeconomic transition and spatial inequality.

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