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Kadazan, Dusun, Murut and Rungus (KDMR) Economic Empowerment by 2030: A 2025 Strategic Analysis of Employment Deficits, Policy Gaps and Enterprise Development

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ABSTRACT
Background: Despite decades of development assistance and inclusion rhetoric, the Kadazan, Dusun, Murut and Rungus (KDMR) communities in Sabah remain disproportionately concentrated in low-income sectors and structurally underrepresented in formal enterprise, high value employment and policymaking. Entrenched employment deficits, persistent skill mismatches and fragmented program delivery continue to reinforce generational economic exclusion as of 2025.

Scope and Purpose: This analysis seeks to critically examine those deficits and proposes a legally anchored roadmap to reposition KDMR talent and enterprise within Sabah's mid-tier industrial expansion. The study evaluates labour market segmentation, TVET relevance, indigenous entrepreneurship and governance gaps across KDMR majority districts, while benchmarking against comparable indigenous inclusion models in Sarawak, Johor and New Zealand.

Analysis: Findings reveal that current interventions are generic and under contextualised, producing low programme retention, limited credit absorption and policy fatigue. Scenario mapping shows that, absent corrective action, the demographic dividend will become a demographic liability by 2030. Conversely, strategic levers such as community-based workforce hubs, a KDMR Enterprise Acceleration Fund (KEAF), participatory budgeting and digital inclusion mandates can yield rapid gains if codified in law. Recommended legal instruments include an Industrial Skills Attachment Agreement gazetted under the Sabah Labour Ordinance, a constitutional Article 31A establishing KEAF oversight and a Native Court amendment to embed economic empowerment within customary jurisdiction.

Implications: Implementing these reforms over the next five years would convert policy ambition into enforceable duty, unlock indigenous capital flows and build a resilient KDMR workforce pipeline. Failure to act risks cementing permanent exclusion from Sabah's high growth sectors and eroding social cohesion.

Keywords: KDMR, Kadazan, Dusun, Murut, Rungus, Sabah, Employment Policy, Indigenous Economy, Enterprise Development, Economic Marginalisation, Policy Gaps, Behavioural Governance, Rural Development, 2030, Foresight

Introduction

Despite decades of development rhetoric and targeted assistance, the Kadazan, Dusun, Murut and Rungus (KDMR) communities remain structurally marginalized within Sabah's labour market and enterprise ecosystem. As of 2025, the evidence is unequivocal: prevailing employment deficits, limited entrepreneurial mobility and underwhelming policy outcomes are not isolated anomalies, they constitute a systemic failure. The persistence of these disparities signals a deeper structural misalignment between institutional interventions and the lived realities, capacities and aspirations of the KDMR population [1].

Accordingly, this analysis brief confronts these failures directly. It reframes the issue not merely as a question of missed opportunity, but as a manifestation of escalating policy neglect, one that risks

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entrenching generational disadvantage unless addressed with urgency, clarity and institutional accountability. Grounded in critical behavioural insights and structural diagnostics, the brief systematically maps out why current frameworks have faltered and what must replace them moving forward.

Specifically, it interrogates patterns of employment inertia, the proliferation of informal economic traps and the persistent disconnect between state-led initiatives and meaningful capacity building. Consequently, through the integration of structured scenario planning, stakeholder mapping and policy foresight modelling, this brief offers not only a roadmap for institutional repair but a framework to reconfigure the employment and enterprise ecosystem for the KDMR community by 2030 [2]. Should the next five years fail to be strategically and decisively utilized to mitigate these structural gaps, the KDMR community will not merely remain behind; rather, they risk becoming structurally excluded from Sabah's economic trajectory altogether.

Background

The Kadazan, Dusun, Murut and Rungus (KDMR) communities constitute a culturally rich and demographically significant segment of Sabah's indigenous population. Despite their longstanding contributions to the state's cultural identity and agrarian foundation, these communities continue to experience systemic marginalisation within the broader framework of economic participation, workforce inclusion and entrepreneurial development. Historically, the socio-economic positioning of the KDMR population has been shaped by colonial era land policies, geographic isolation and a persistent developmental bias that favoured urban centres and coastal commercial hubs. As a result, the transition of these communities from subsistence-based livelihoods to formal economic integration has been slow, uneven and structurally constrained [3,4].

Structural Realities and Socio-Economic Positioning of the KDMR Community (2025)

As of 2025, the socio-economic realities facing the Kadazan, Dusun, Murut and Rungus (KDMR) population paint a concerning and structurally persistent picture. Labour force participation remains heavily concentrated in low wage and mobility sectors, particularly in subsistence agriculture, manual labour, food and beverage services, construction and informal trading [5-7]. These roles are typically marked by limited job security, low skill transferability and minimal opportunities for vertical mobility. While the broader Malaysian economy has seen gradual diversification and a shift toward knowledge intensive, service based and digital sectors, the KDMR community remains significantly underrepresented in these domains. Despite that, it has become apparent that participation in high value employment segments such as finance, digital services, logistics, oil and gas and technological industries remains negligible.

Household income data further reflects the entrenched nature of this economic exclusion. On average, families within the KDMR demographic fall into the lower B40 and lower M40 income brackets, with significant interdistrict disparities. Observations in rural and interior districts such as Ranau, Tambunan, Nabawan and Pitas exhibit much lower income averages, slower wage growth and more fragile employment patterns compared to the peri-urban fringes such as of Kota Kinabalu and Penampang, where slightly more diversified income generating opportunities exist. Furthermore, education outcomes remain a key limiting factor in employability. Educational attainment beyond the Sijil Pelajaran Malaysia (SPM) level is limited, particularly among male youth in rural areas. This deficit in post-secondary qualifications, vocational certifications and professional credentials creates a durable barrier to economic mobility and reinforces generational cycles of low skilled employment [6,7].

The structural exclusion of the KDMR community is compounded by several intersecting deficits including but not limited to, restricted access to growth capital, limited financial literacy, poor land productivity due to outdated farming practices, and the near total absence of representation in economic decision-making bodies or public policy forums. In the domain of entrepreneurship, while there is growing interest and informal activity, KDMR involvement remains largely confined to micro scale or subsistence level enterprises. These ventures often lack access to institutional financing, strategic mentorship, scalable supply chains and digital infrastructure. Thus, without these enablers, KDMR entrepreneurs remain trapped in the informal economy, unable to scale or sustain their efforts in the long term.

This condition is further exacerbated by spatial and infrastructural disadvantages. Many KDMR majority areas face geographic isolation, inadequate road connectivity, patchy or absent broadband coverage and limited access to banking, training or market facilities. The lack of integrated ecosystem support from skills development to supply chain access reinforces the marginality of KDMR enterprises and workers in the state's rapidly modernising economic system. As Sabah continues to position itself within national and regional growth corridors, the risk is not only that the KDMR community will be left behind, but that their marginalisation will become structurally institutionalised if these foundational constraints remain unaddressed.

Limitations of Governmental Interventions and the Emerging Generational Disconnect

In response to the longstanding economic disparities faced by the KDMR community, both federal and state governments have, over the past two decades, implemented a broad range of targeted interventions aimed at fostering indigenous economic empowerment. These efforts include financial assistance schemes such as the Skim Pembiayaan Mikro-i Bumiputera under TEKUN Nasional, enterprise support via the MARA Entrepreneurship Development Scheme, competitive grants such as the Rural Business Challenge and subsidies for agricultural modernisation. Complementary training initiatives have also been introduced under agencies like the Ministry of Human Resources and the Ministry of Rural and Regional Development. Additionally, several of these programs were operationalised with specific reference to native populations in Sabah and Sarawak, and received further visibility and funding through national development planning frameworks such as the 11th and 12th Malaysia Plans[8].

However, despite their proliferation, the efficacy of these interventions remains deeply limited. Empirical assessments, as well as ground level implementation reviews, suggest that these programs consistently fall short of producing sustainable and transformative outcomes for the KDMR community. Among the most critical structural limitations are: the top-down design of initiatives that often lack cultural and contextual sensitivity; poor dissemination and outreach strategies, particularly in remote and interior regions; minimal mechanisms for monitoring and evaluation; and a chronic absence of coordination between federal and state level institutions. Moreover, these interventions typically lack embedded feedback loops, which are essential for adaptive policy making and continuous program improvement. The result is a policy architecture that is fragmented, siloed and often misaligned with the on-the-ground realities of KDMR communities.

Equally concerning is the failure of these initiatives to engage with the behavioural and generational dynamics that have emerged within the KDMR demographic over the past decade. Firstly, younger members of the community, particularly those born after 1990 are increasingly detached from traditional agricultural and artisanal occupations. However, despite this shift, they face severe limitations in entering formal employment sectors or professional tracks due to skill mismatches, the absence of effective yet targeted support systems and a growing sense of economic disenfranchisement. Secondly, while there has been a noticeable rise in grassroots entrepreneurial efforts among millennial KDMR individuals including ventures in agricultural product resale, handmade apparel and digital content services these micro enterprises are often launched without formal training, business planning or access to mentorship and institutional networks.

As a result, many of these early-stage entrepreneurial activities struggle to achieve sustainability or scalability. They frequently collapse under the weight of poor cash flow management, limited understanding of business fundamentals and weak exposure to structured value chains and competitive ecosystems. Therefore, without institutional scaffolding to support these ventures, such as targeted incubator programs, priority-first cooperative models or access to venture capital and digital infrastructure, the economic energy of this generation risks being dissipated rather than harnessed for community wide upliftment.

This failure to link policy intervention with behavioural insight and generational potential represents a missed opportunity that continues to widen the disconnect between state-led programs and the actual developmental trajectory of the KDMR population. Closing this disconnect must become a central priority in any forward-facing strategy toward economic empowerment by 2030 [9]. The cumulative effect of these dynamics is a structurally embedded form of economic exclusion that persists despite multiple rounds of policy reform, funding injections, and political commitments. While certain individuals and localised communities have succeeded in breaking through these structural constraints, they remain exceptions rather than the norm. The macro level trend remains one of marginal progress, fragmented intervention and policy drift.

This analysis takes this context as its foundational concern, not merely to restate well documented shortcomings, but to critically interrogate their persistence, expose the institutional and behavioural dynamics that sustain them and offer a strategically grounded pathway to reimagine the pedagogies of economic empowerment could look like for the KDMR community by 2030. The imperative is no longer to design aid-based interventions, but to construct durable frameworks that address structural inequities, build competitive capabilities and prepare the KDMR population to thrive in a dynamic yet digitally driven Sabah economy.

Preliminary Analysis

This section establishes the baseline conditions as of 2025 to inform strategic foresight toward 2030. It presents a critical assessment of existing employment deficits, skill mismatches and entrepreneurial stagnation within the KDMR community. The analysis identifies core structural, cultural, economic and policy related impediments that continue to undermine equitable economic participation. The intent is not merely to catalogue deficiencies, but to surface strategic fault lines requiring urgent attention and reform.

Employment Deficits and Labour Market Exclusion

As of 2025, the employment landscape for the KDMR community reflects a chronic state of exclusion and underutilisation. Despite their demographic significance, KDMR individuals remain heavily concentrated in low skilled, low wage and high vulnerability segments of the labour market. These include agriculture, informal construction, retail trade and auxiliary food services, sectors with minimal job security, low social protection and limited vertical mobility. Participation in professional, managerial and technical occupations remains statistically insignificant.

A magnified observation at labour force data reveals stark underrepresentation in the formal private sector, particularly within strategic growth sectors such as energy, finance, digital services, transport logistics and manufacturing. The gap is even more acute in corporate leadership and technical vocations, where the KDMR presence is functionally negligible. This employment stagnation cannot be attributed solely to educational or technical deficiencies; rather, it stems from layered barriers, including historical disenfranchisement, geographic remoteness, poor institutional access and intergenerational displacement from emerging industries.

Skill Mismatches and Educational Misalignment

The issue of employability is further compounded by a persistent mismatch between the skills possessed by the KDMR population and the demands of Sabah's evolving labour market. Existing vocational training programs, where available, often fail to equip participants with industry relevant competencies, digital adaptability, or marketable certifications. The design of many training modules remains outdated, lacking integration with industry input or labour market forecasting. Moreover, enrolment in technical and vocational education and training (TVET) programs remains low among KDMR youth, largely due to poor outreach, limited institutional presence in interior regions and a lack of confidence in the economic returns of such pathways.

At the tertiary level, dropout rates among rural KDMR students remain disproportionately high, often driven by financial pressure, cultural dislocation and weak academic support systems. The cumulative result is a skills ecosystem that does not meaningfully prepare the KDMR workforce for either the formal economy or for self-sustaining enterprise development. This misalignment has direct consequences on hiring, income progression and significantly in the aspect of workforce retention.

Barriers to Enterprise Development and Entrepreneurial Mobility

While there is visible entrepreneurial activity within the KDMR community, particularly at micro and informal levels, these ventures remain structurally disconnected from mainstream enterprise ecosystems. Most KDMR owned businesses are concentrated in subsistence retail, small scale food production, handicrafts and seasonal agriculture. The vast majority operate informally, without business registration, banking and financial records, or access to institutional credit. Consequently, they are excluded from formal capital markets, public procurement schemes and strategic partnership opportunities.

Barriers to business scalability include a lack of collateral for loans, poor digital literacy, limited access to e-commerce platforms and the absence of targeted incubator or mentorship programs tailored to indigenous or rural entrepreneurs. Furthermore, bureaucratic hurdles and inconsistent local government facilitation deter many from formalising their businesses. The absence of community based cooperative models, micro investment instruments or culturally responsive business support mechanisms further undermines long term sustainability.

Notably, while entrepreneurial ambition among younger KDMR individuals appears to be growing, this potential remains largely untapped due to fragmented institutional scaffolding and insufficient policy coordination across agencies. Without a deliberate effort to strengthen entrepreneurial ecosystems from grassroots to growth stage ventures, the community risks being locked into a perpetual cycle of informal enterprise with limited upward mobility.

Structural and Policy Related Impediments

Across all dimensions of employment and enterprise development, the persistence of KDMR economic marginalisation can be traced to deeply embedded structural and policy level deficits. These include spatial inequality in access to state services, underinvestment in rural economic infrastructure and the absence of long-term planning frameworks tailored to indigenous community development. While national policies have often highlighted inclusivity and Bumiputera advancement, execution at the state and local levels has been inconsistent, fragmented and politically diluted.

Many programs suffer from a lack of real-time performance tracking, weak institutional accountability, and an overreliance on generic templates that do not reflect the sociocultural and geographic diversity of KDMR populations. There is little evidence of sustained community engagement, participatory policy design, or iterative learning in the implementation process. As a result, policy fatigue has set in, with community trust in government interventions continuing to erode.

Key Observations and Baseline Trends in 2025

Taken together, the preceding analysis reveals several interlinked trends that form the analytical baseline for this brief. First, the KDMR labour profile remains heavily skewed toward low value sectors such as informal agriculture, construction and small-scale services, all of which offer minimal formal protections, career progression or income stability. Second, the current landscape of skills training and educational pathways remains poorly aligned with evolving market demands, particularly in digital, technical and industrial sectors that now dominate Sabah's strategic growth corridors [9-12].

Third, while there is a growing presence of entrepreneurial activity within the KDMR community, these efforts remain structurally marginalised, operating without access to institutional financing, strategic mentorship or pathways to scale. Fourth, policy interventions introduced over the past two decades have largely been fragmented, overly top-down in design and insufficiently responsive to the sociocultural and geographic realities of the KDMR population [11].

Finally, and most critically, the cumulative effect of these dynamics points to a significant risk: without corrective institutional mechanisms and a shift toward community driven frameworks, the structural exclusion of the KDMR community is likely to deepen by 2030, further entrenching economic inequity and marginalisation. This baseline reiterates the imperative for the sections to explore the behavioural, stakeholder and strategic foresight dimensions required to reposition the KDMR community as a dynamic and competitive contributor to Sabah's future economy.

Purpose and Scope of Analysis

This analysis is undertaken to critically examine the structural employment deficits, enterprise stagnation, and persistent policy gaps constraining the economic advancement of the Kadazan, Dusun, Murut, and Rungus (KDMR) communities in Sabah. Grounded in the realities of 2025, it aims to establish a strategic foundation for recalibrating interventions that can enable measurable progress by 2030 [13,14].

The scope of this brief encompasses three interdependent domains: (i) workforce participation, (ii) entrepreneurial capacity and (iii) institutional effectiveness. It evaluates key behavioural patterns, sectoral access barriers and generational disparities within the KDMR population, with a geographical focus on rural and semi-urban districts such as Ranau, Tambunan, Nabawan and Penampang. Institutional frameworks from both state and federal levels are analysed for their alignment, responsiveness, and structural limitations.

Rather than offering prescriptive solutions, this analysis functions as a strategic diagnostic, designed to inform more adaptive, evidence based and community aligned policy development. This brief's ultimate aim is to reposition the KDMR community as a competitive and resilient actor in Sabah's economic trajectory toward 2030.

Behavioural Analysis

While structural and policy-oriented constraints form the foundation of economic exclusion among the Kadazan, Dusun, Murut and Rungus (KDMR) communities, it is equally critical to interrogate the behavioural dimensions that influence how individuals and households respond to opportunity, risk and institutional engagement. This section provides a deeper analytical lens into how community behaviour shaped by generational perception, cultural norms, lived experience and institutional memory continues to reinforce or resist the transition toward employability and enterprise development. Therefore, understanding these patterns is fundamental for any policy intervention aiming for behavioural traction and sustained impact between 2025 and 2030 [15-22].

Intergenerational Perceptions of Work, Success and Mobility

Across KDMR communities, generational cohorts display markedly different orientations toward work, economic mobility and definitions of success. Older generations i.e Generation X and earlier often associate economic stability with government jobs, subsistence agriculture or civil service roles; forms of employment perceived as secure, reputable and predictable. By contrast, younger generations, particularly those born after 1990, have demonstrated a more fragmented relationship with both formal employment and state-based career pathways.

Among Millennials and Gen Z in the KDMR community, aspirations are increasingly shaped by digital exposure, entrepreneurial influencers and informal peer networks. However, these aspirations often lack the scaffolding required for realisation, including capital literacy, institutional mentoring and market access. It is observed that, many young KDMR individuals reject traditional paths yet remain unable to fully participate in modern industries due to systemic access limitations. This evidently creates a behavioural limbo: a generation eager to move but unable to gain economic traction, often leading to disengagement, cyclical underemployment or premature abandonment of entrepreneurial initiatives.

Risk Aversion, Informality and Economic Survivalism

The persistence of informal economic activity among KDMR individuals is not solely a structural outcome, but a rational behavioural response to environments perceived as risky, opaque or exclusionary [23,24]. Many within the community exhibit high levels of economic risk aversion, particularly when it involves debt exposure, regulatory compliance or formal business registration. This aversion is not cultural in origin but conditioned by prior experiences of program failure, debt traps, inconsistent enforcement of public schemes and persistent bureaucratic red tape at a municipal level.

In practice, this has led to a prevalence of what may be termed “economic survivalism”; a short nterm income generation strategy that minimises exposure to institutional systems while maximising immediate liquidity. Common examples include unregistered food stalls, seasonal roadside vending, informal transport services and unlicensed agricultural trading. While these activities provide subsistence income, they offer little protection, scalability or intergenerational transferability. Behaviourally, this fosters a dependency on low risk, low reward models that disincentivise innovation and discourage formal economic participation.

Cultural Identity, Community Obligation and Economic Decision Making

The role of cultural norms and communal expectations in shaping economic behaviour within KDMR communities remains significant, yet underacknowledged in policy design. Concepts such as adat, familial duty and collective ownership often influence how income is managed, how labour is allocated, and whether risk is socially acceptable. For example, in many instances, the notion of the success of a single entrepreneur within a family unit results in increased pressure for income redistribution rather than reinvestment. This dilutes the potential for capital accumulation and enterprise expansion.

Additionally, the perception of individual economic advancement as a departure from community values can act as a social deterrent, particularly in rural areas. This creates tension between modern economic imperatives and traditional identity structures. If policies and programs fail to engage with this cultural context, they risk appearing externally imposed, value disruptive and socially illegitimate even when financially attractive.

Trust, Institutional Memory and Policy Fatigue

One of the most under explored yet consequential behavioural factors in KDMR economic stagnation is the erosion of trust in state and institutional mechanisms. Decades of inconsistent delivery, unmonitored programs, politicised aid and culturally tone-deaf interventions have created a deep reservoir of policy fatigue. In many districts, the dominant narrative is not one of resistance, but resignation; a quiet disengagement from public initiatives due to perceived futility [25].

Institutional memory within the community is not merely anecdotal but forms a behavioural framework through which all new policies are judged. Promises of aid, training or support are often met with scepticism unless accompanied by immediate, visible and verifiable results. This behavioural inertia complicates new policy rollouts, particularly those dependent on voluntary community uptake, registration or co-financing.

Behavioural Levers for Economic Activation

Despite the entrenched challenges, several behavioural levers offer pathways for activation and transformation if strategically harnessed. Firstly, peer based learning models, wherein community members learn directly from relatable local success stories have shown promise in increasing participation, especially when supported by trust-based intermediaries. Secondly, localised incentive schemes that reward formalisation (e.g., tax waivers, capital matching and digital onboarding) can gradually shift risk averse behaviour without undermining social identity [26,27].

Additionally, district level entrepreneurial competitions, priority based cooperative ownership models and storytelling campaigns that celebrate culturally rooted success can reposition economic advancement as a communal, rather than individualistic, achievement. Programs that are delivered in local dialects, embedded within existing community events and facilitated by known figures have also demonstrated higher behavioural adoption rates compared to institution-led efforts.

Lastly, leveraging digital tools such as mobile apps for informal vendor registration, AI based training bots in local languages, or community-based savings platforms presents an opportunity to bypass traditional bottlenecks and introduce modernisation in a culturally respectful and behaviourally adaptive manner.

Stakeholder and Scenario Analysis

Addressing the employment and enterprise development gaps within the Kadazan, Dusun, Murut and Rungus (KDMR) communities requires a multi stakeholder approach underpinned by targeted and coordinated governance, responsive policy mechanisms and community grounded interventions. This section identifies the core stakeholders with the capacity to influence outcomes and outlines three potential scenarios: (i) optimistic case, (ii) baseline case and (iii) adverse case, that may emerge based on present trends and intervention choices.

Stakeholder Analysis: Landscape and Strategic Influence

The institutional landscape surrounding KDMR economic empowerment is diverse, yet highly fragmented. At the core of this ecosystem are six critical stakeholder groups, each with distinct levels of influence, interest and operational responsibility. Firstly, the State Government of Sabah holds the most significant policymaking authority, with jurisdiction over land use, vocational education, infrastructure development and economic incentives through frameworks such as the Sabah Maju Jaya (SMJ) plan. Its capacity to allocate targeted development funds, structure public-private partnerships and enforce inclusion mandates places it at the apex of strategic influence. However, its interventions risk ineffectiveness without behavioural alignment and grassroots trust building.

Secondly, district authorities serve as implementation anchors, particularly in rural KDMR majority areas. Their ability to mobilise community actors, monitor enterprise activity, and localise policy delivery makes them vital for translating strategic intent into operational reality. Their impact, however, is constrained by limited autonomy, administrative capacity and inconsistent policy continuity. Third, the KDMR community leaders and traditional councils hold soft power, particularly in shaping behavioural norms, local legitimacy and cultural framing of economic change. Their endorsement can accelerate or stall the uptake of formal employment or entrepreneurship programs, especially among older and rural populations. Despite their influence, they are often underutilised in policy consultation and program co-design [28].

Fourth, entrepreneurs within the KDMR community, particularly emerging micro and small business owners, are key agents of ground level transformation. Their experiences highlight real time system gaps, from capital access and digital adoption to bureaucratic navigation. Strengthening their ecosystem could catalyse peer learning, informal mentorship and intergenerational knowledge transfer. Fifth, Educational and vocational training institutions, including MARA, polytechnics and TVET centres, are positioned to close skills gaps and modernise workforce readiness. However, their effectiveness depends on curriculum-to-market alignment, outreach to interior regions, and adaptive delivery models that resonate with KDMR realities.

Finally, civil society organisations (CSOs), including indigenous rights groups, youth associations, and developmental NGOs, play a growing role in policy advocacy, capacity building and programme delivery. Their networks often reach deeper than state actors and can provide credible intermediaries between the community and the state. The interplay among these stakeholders will define the trajectory of any intervention. Effective outcomes will depend on shared visioning, data sharing and coordinated planning grounded in mutual accountability.

Scenario Analysis: Possible Futures (2025 to 2030)

To anticipate the potential outcomes of current trends and reform efforts, this analysis considers three plausible scenarios by 2030. Each scenario is shaped by levels of institutional responsiveness, stakeholder coordination and behavioural adoption within the KDMR community [29-33].

Optimistic Scenario: Strategic Convergence and Behavioural Alignment

In this scenario, the Sabah state government integrates KDMR empowerment as a core pillar within its economic planning frameworks. District level authorities are empowered with budgetary discretion and incentivised to deliver culturally contextualised employment and entrepreneurship programs. TVET institutions undergo reform to reflect market demand, incorporating mobile delivery and mentorship driven learning models. Community leaders are formally included in programme co-design, increasing trust and uptake. Subsequently, Entrepreneurial activity scales through cooperative networks, digital inclusion, and structured access to finance. Civil society supports programme implementation and monitors equity outcomes.

As per this scenario, KDMR employment should observe within the formal sectors an increase by fifteen to ten percent, youth engagement in structured enterprise could double, and average household income rises across B40 and M40 thresholds by progressive purview of eight to twelve percent. Consequently, trust in state mechanisms improves and reduces dependence on informal economic survivalism [33,34].

Baseline Case Scenario: Incremental Gains and Fragmented Implementation

In this trajectory, piecemeal improvements take place without full alignment. For instance, new funding is introduced, and some districts pilot successful community-led programmes, but outcomes vary widely due to inconsistent political will and institutional silos. Training centres expand coverage, but fail to fully address curriculum mismatch or retention challenges. Entrepreneurs remain isolated, with occasional success stories but no enabling ecosystem. Subsequently, community perception improves in pockets, but policy fatigue and institutional scepticism persist. While income and employment metrics improve modestly, the KDMR community remains vulnerable to structural shocks and continues to rely heavily on informal income streams.

Adverse Case Scenario: Institutional Drift and Deepening Exclusion

This scenario emerges should current gaps are left unaddressed and stakeholder coordination deteriorates. Development funding continues in a business-as-usual manner, disconnected from on-the-ground realities. District authorities operate without resources or strategic clarity, and traditional leaders are sidelined or co-opted without genuine authority. Training programs lose credibility and KDMR youth further disengage from state structures.

Entrepreneurship stagnates due to rising input costs, lack of scale and market access bottlenecks. Informality deepens, public trust erodes, and dependency culture is reinforced. By 2030, the KDMR community is not only further marginalised, but also systemically locked out of Sabah's digital and industrial transformation.

Nevertheless, the likelihood of outcomes by 2030 will not be a product of economic cycles alone, but of governance choices, behavioural intelligence and institutional coordination made between now and the next five years. The pathway to economic inclusion for the KDMR community lies not in isolated initiatives, but in a deliberate, data informed convergence of stakeholder effort, trust, evidence and community rooted design [35-39].

Analysis and Discussion

The preceding sections have established a foundational understanding of the structural, behavioural, and institutional dynamics underpinning the economic exclusion of the Kadazan, Dusun, Murut, and Rungus (KDMR) communities in Sabah. This section consolidates those insights into a critical analysis of policy performance, identifying the fault lines between policy formulation and lived experience. It builds upon observed outcomes, stakeholder positioning and scenario mapping to interrogate why existing interventions remain inadequate and what systemic recalibrations are necessary for a coherent, results oriented strategy toward 2030 [39,40].

Disjunction Between Policy Intent and Implementation Outcomes

A defining feature of the policy environment surrounding KDMR empowerment is the widening disjunction between (i) programmatic ambition and (ii) implementation reality. While the language of inclusion, capacity building and economic equity is regularly invoked in federal and state planning instruments such as the 12th Malaysia Plan and the Sabah Maju Jaya blueprint, these documents rarely translate into locally embedded, behaviourally informed interventions with tangible impact. Policy intent often foregrounds empowerment through skills development, financial support and entrepreneurship. However, fieldlevel evidence points to limited uptake, poor retention and low rates of program success.

The failure is not purely administrative. It is conceptual. Policies tend to be designed using top-down templates with minimal contextual grounding in KDMR socio-economic patterns. Delivery mechanisms rarely account for local infrastructure limitations, cultural mediators, behavioural resistance or the political economy of rural development. As a result, even well-funded initiatives become inert, perceived by target communities as abstract, inaccessible or externally imposed. This not only undermines policy efficacy but corrodes institutional legitimacy in the eyes of the KDMR population.

Misalignment and Underutilisation of State Aid Programs

The underutilisation of state aid programs among KDMR individuals and enterprises is not simply a matter of information asymmetry or outreach failure. It is symptomatic of a deeper misalignment between (i) what is offered and (ii) what is needed. Training schemes, credit facilities, and grants are frequently designed without regard to the actual economic starting point, risk tolerance or behavioural logic of the intended beneficiaries. For instance, micro loans may be made available without addressing pre-conditions such as formal registration, digital literacy or access to stable supply chains, thus rendering them inaccessible or irrelevant to most KDMR micro-entrepreneurs [22].

In parallel, employment focused policies often target generic skillsets without analysing labour market absorption capacity, regional demand, or the spatial distribution of opportunities. Training centres may be built in urban peripheries while the majority of KDMR youth remain in disconnected interior zones. Employment placement programs may push participants into mismatched roles, resulting in dropout, informal reversion or intergenerational discouragement. The cumulative effect of these mismatches is a decline in program credibility and a retraction of community engagement.

Fragmentation, Institutional Inertia and Stakeholder Disconnect

The stakeholder analysis reveals a fragmented ecosystem characterised by overlapping mandates, isolated initiatives and weak coordination across agencies. Ministries, district offices, community leaders and civil society actors often operate in parallel, with minimal information flow, inconsistent program standards and no unified monitoring architecture. This leads to duplication of effort in some areas and complete neglect in others [26-31].

Institutional inertia further constrains responsiveness. Many agencies remain tethered to legacy models of delivery, resistant to experimentation and risk averse in adopting community driven planning. Even when pilot programs demonstrate success, scale-up is rare due to bureaucratic rigidity, lack of cross-agency collaboration or political disinterest. As a result, opportunities to institutionalise innovation are lost and promising initiatives are isolated rather than mainstreamed. The KDMR community leaders, while influential, are frequently engaged in symbolic roles without decision making power or sustained consultation. Entrepreneurs, who offer direct insight into what works and what fails, are rarely involved in program evaluation or design. This stakeholder disconnect reinforces a cycle where the supply of interventions continues without a corresponding demand, leading to inefficiency, disillusionment and wasted public resources.

Integrative Reflection on Behavioural and Scenario Insights

The scenario analysis in Section 6 indicates that policy outcomes are not predetermined, they are contingent on institutional choices, behavioural traction and coordinated execution. The optimistic scenario requires (i) deliberate correction of the implementation gaps and (ii) proactive behavioural engagement strategies. Conversely, the baseline and adverse cases trajectories are not merely cautionary, they are imminent if current inertia persists.

Behavioural analysis provides critical insight into why uptake remains low; formality is resisted and trust in public systems is fragile. It explains the persistence of economic survivalism and informal entrepreneurship not as cultural deficiencies, but as rational adaptations to systemic failures. This understanding should guide policymakers to design interventions that reduce entry costs, build credibility through early wins and align with social identity rather than challenge it.

Critically, the evidence suggests that without building behavioural alignment into institutional design, no amount of capital injection or policy rhetoric will yield transformative outcomes. Policies must move from a supply driven logic to a demand responsive ecosystem that meet KDMR communities where they are, not where frameworks presume them to be.

Implication and Foresight

This section projects the medium to long term implications of Sabah's current policy trajectory on the economic empowerment of the Kadazan, Dusun, Murut and Rungus (KDMR) communities. It outlines the systemic risks of inertia, the strategic costs of non-intervention and the potential social and economic dividends of meaningful reform. Through a reformist outlook, it also identifies key foresight signals and outlines anticipated socio-economic trends that will shape the operating environment between 2025 and 2030. The goal is to inform not only policy action, but strategic anticipation.

Implications

Should existing implementation patterns persist, marked by institutional silos, behavioural misalignment and top-down programming, the exclusion of KDMR communities from Sabah's formal economic transformation will intensify. Employment disparities will widen as digital and industrial sectors accelerate without proportional KDMR participation. Youth disengagement, already observable, may calcify into generational economic apathy therefore, reinforcing cycles of informality, subsistence and underemployment.

The continuation of ineffective enterprise schemes will also contribute to high rates of business failure, especially among first time KDMR entrepreneurs operating without structural support. This has wider implications: loss of capital, increased household vulnerability, and growing scepticism toward state-led economic interventions. In the absence of corrective mechanisms, policy fatigue may turn into policy rejection; undermining not only program effectiveness but also institutional credibility.

Socio-Economic Risk Accumulation

Structural exclusion, if unaddressed, will generate cumulative socio-economic risks. These include increased rural-urban migration from KDMR majority districts, exacerbating urban congestion while depopulating and economically hollowing out rural zones. Persistence spatial inequality will deepen as infrastructure investment and job creation remain concentrated in "already-advantaged" regions. Over time, this may give rise to resentment narratives, identity based political mobilisation and reduced national cohesion.

A secondary risk is the erosion of intergenerational continuity. Without formal pathways for youth to remain economically embedded in their communities, traditional knowledge systems and local production capacities may be lost. In this context, the economic marginalisation of the KDMR population is not only a loss of labour productivity, it represents a potential collapse of indigenous knowledge economies, local resilience systems and socio-cultural continuity.

Windows of Opportunity: 2025 to 2030

Despite the risks, the coming five-year window presents a pivotal opportunity. Sabah's ongoing economic diversification, driven by infrastructure expansion, digital economy strategies, and increased regional investment interest may offer a strategic entry point for inclusive design. If KDMR communities are integrated into these value chains early, they can transition from economic peripheries to catalytic contributors.

Labour market demand for middle skilled, tech adaptable workers is rising. Should TVET reforms be accelerated and embedded within district level delivery systems, particularly with industry linked apprenticeships and community targeted recruitment, the KDMR youth category can form a new workforce base for Sabah's mid-tier industrial expansion. Thus, enabling the prospects and concept of job creation to materialise further.

Simultaneously, the rise of micro platform economies and digital cooperatives presents a scalable model for KDMR entrepreneurship. With the right scaffolding such as mobile financing tools, bundled services, cooperative mentorship and localised e-commerce access, small scale enterprises can evolve into stable income generating units. This would require a recalibration of current funding instruments toward more risk tolerant, relationship based and socially embedded finance models.

Foresight

Digital Integration of Public Services

The ongoing digitalisation of public services in Sabah and across Malaysia is rapidly transforming the way citizens interact with the government i.e. shifting service delivery from analogue, in-person models to digital platforms accessible via smartphones, portals, kiosks and mobile applications. This shift is particularly visible in domains such as licensing, microloan applications, training program registration, SME grants and social welfare distribution.

While digital transformation promises greater efficiency, reach and transparency, it also introduces a critical policy paradox: the same tools that can democratise access may, if poorly implemented, deepen exclusion for digitally marginalised communities. Within the context of the Kadazan, Dusun, Murut and Rungus (KDMR) communities, particularly in interior districts such as Nabawan, Pitas and Tambunan digital infrastructure remains uneven, with low broadband penetration, intermittent mobile coverage and a lack of affordable smart devices. Beyond infrastructure, digital literacy among rural and older populations remains limited, with many unable to navigate application interfaces, online portals or digital authentication processes.

For KDMR individuals without digital readiness, the increasing reliance on e-services risks becoming an invisible "gatekeeper" thus, effectively locking them out of critical programs, subsidies or enterprise facilitation tools simply due to lack of connectivity or user fluency. The transition to digital-first platforms, if unaccompanied by targeted onboarding efforts, will inadvertently reinforce the very barriers it seeks to dismantle. Moreover, digitalisation introduces a new class of "procedural exclusion," where forms, notifications, and applications are issued in technical Bahasa Malaysia or English without translation into indigenous languages or oral explanation formats. This creates disproportionate friction for older KDMR citizens and non-literate users, further undermining uptake and trust in public programs.

Strategically, policymakers must reframe digitalisation not merely as a technological upgrade, but as a structural inclusion agenda. Foresight planning for 2025 to 2030 must include dedicated digital equity initiatives focused on [41,42]:

(i) Digital literacy rollouts embedded within TVET institutions, community centres, and religious or cultural venues;
(ii) Offline to online onboarding strategies using local intermediaries (e.g., KDMR youth volunteers, civil society agents, village leaders) to assist first time users;
(iii) Language-accessible content, including but not limited to, instructional videos, vernacular translations and audio-guided support for online systems;
(iv) Low tech fallback options (e.g., mobile kiosk stations, travelling digital officers, hybrid submission pathways) for communities undergoing digital transition;
(v) Public-private partnerships with telcos and "fintech" firms to provide subsidised access to internet packages, entry-level devices and cloud-based services

Thus, without these measures, digitalisation may exacerbate, not bridge the socio-economic gap. In contrast, a behaviourally aware and culturally anchored digital inclusion strategy can unlock new efficiencies in program delivery, empower local entrepreneurs through digital tools and equip KDMR youth with the baseline competencies needed to participate in Sabah's evolving digital economy. Therefore, Digital access is no longer a luxury but has become the infrastructural backbone of modern citizenship and economic participation. In correlation, for the KDMR community, inclusion in the digital future of public service delivery is not simply a technical issue; it is a question of rights, equity and long-term economic sovereignty [42,43].

Climate Adaptation and Green Economy Shifts

The accelerating impacts of climate change and the corresponding global pivot toward sustainable development are gradually reshaping the policy and economic landscapes of Malaysia, including Sabah. The transition to climate resilient infrastructure, renewable energy systems and environmentally responsible industries is no longer speculative; it is becoming a central axis of development planning and fiscal investment. Within this broader shift lies a significant but often underrecognised opportunity for the KDMR communities: the emergence of green economy sectors as potential vehicles for inclusive employment, enterprise development and community-based resource management.

Sabah's rural interior, where many KDMR majority communities reside hosts a wide range of ecological assets, including forest reserves, rivers, agro-ecological zones and biodiversity corridors. These environments not only face mounting climate risks but also possess untapped potential for sustainable economic models such as community-based ecotourism, agroforestry, organic farming, renewable energy microgrids and conservation linked carbon markets. However, in the absence of deliberate policy alignment and skill building interventions, the KDMR community risks remaining at the periphery of these emergent sectors, which translates to exclusion from both the environmental planning process and the economic gains derived from ecological assets within or near their territories.

One of the primary foresight challenges is that current green economy strategies are often technocratic, urban centred, and oriented toward medium to large enterprises. As such, they tend to overlook the unique value proposition of indigenous and rural populations, who not only inhabit but steward many of the very ecosystems targeted for green investment. Without direct inclusion of KDMR youth, community cooperatives or local entrepreneurs in the design and rollout of these initiatives, the state may replicate previous patterns of top-down delivery, resulting in low uptake, uneven benefit distribution and further alienation from formal economic planning.

Therefore, positioning the KDMR population particularly its youth and nascent entrepreneur class as early adopters and stakeholders in Sabah's green economy is essential. This involves equipping them with context specific green skills, such as sustainable agro-processing techniques, eco certification literacy, forest-based enterprise development, environmental monitoring and basic renewable energy system maintenance. Notably, equally important is ensuring that KDMR communities are not merely downstream recipients of green economy projects, but upstream co-designers and co-owners of the models used to monetize, preserve and manage their environmental resources.

To achieve this, state and federal actors must shift from viewing climate adaptation as an infrastructure concern to understanding it as an opportunity for distributed economic empowerment. Climate-smart policies must therefore incorporate indigenous territorial planning, localised training pipelines, and cooperative based enterprise models that allow for equitable revenue sharing and intergenerational knowledge transfer. Furthermore, funding mechanisms such as (i) green bonds, (ii) carbon credits and (iii) green impact investment platforms should be made accessible to KDMR ventures, with institutional intermediaries facilitating their entry into these emerging financial ecosystems [44].

The next decade will witness a decisive restructuring of how environmental capital is monetised, regulated and governed. Whether the KDMR community is included in or excluded from this transition will depend on the intentionality of current policy choices. If left unaddressed, the green transition may mirror the industrial transitions of the past, generating wealth for others while reproducing the marginalisation of indigenous communities. However, with foresight, coordinated yet pragmatic inclusion, the green economy can serve not only as a climate imperative, but as a generational turning point for KDMR economic agency and ecological sovereignty [45].

Decentralisation and Local Governance Restructuring

As Malaysia continues to explore structural reform to enhance public sector efficiency and responsiveness, the prospect of greater fiscal and administrative decentralisation is increasingly gaining traction. While currently uneven across the Federation, this shift, if realised by 2030 could fundamentally alter the architecture of policy design, funding flows and program implementation. For Sabah in particular, where developmental asymmetries and regional diversity are deeply entrenched, decentralisation offers not only a governance opportunity but a strategic imperative.

Within this evolving context, the relevance of district level leadership will become more pronounced. Local authorities, including district offices and municipal councils, will be expected to play a larger role in both the formulation and delivery of development interventions. For KDMR majority districts such as Ranau, Tambunan, Nabawan and Pitas this shift presents a dual edged prospect. On one hand, decentralisation could enable a much-needed contextualisation of policy, allowing programs to be tailored to the specific needs, capacities and aspirations of local communities. On the other, without prior investment in institutional capacity, the burden of decentralised governance may reinforce administrative gaps, deepen inequalities and overstrain under resourced districts.

The long-term sustainability and impact of any employment or enterprise development program targeting the KDMR community will depend heavily on the maturity of local governance systems. Current observations reveal that many district administrations operate with limited data infrastructure, inadequate policy planning units and constrained autonomy in fiscal decision making. They often rely heavily on top-down allocations with rigid spending directives, leaving little room for adaptive or community responsive planning.

Building governance capacity at the district level must therefore become a foresight priority. This includes the institutionalisation of participatory budgeting mechanisms that allow community members, especially youth, indigenous leaders and entrepreneurs to shape local investment priorities. Additionally, embedding data-driven monitoring frameworks at the district level will be essential for measuring program outcomes, identifying implementation bottlenecks, and adjusting course in real time. Local governments must also be equipped to undertake inclusive planning processes that engage civil society, educational institutions and informal actors in decision making structures.

Another foresight consideration is the decentralisation of resource mobilisation. Should districts be empowered to generate or manage their own revenue streams through tourism, licensing or local enterprise taxation, then KDMR districts will require both the technical acumen and governance transparency to manage these assets equitably. Without such safeguards, decentralisation may simply shift inefficiencies from the federal to the local level, with limited benefits for target communities.

Moreover, district level institutions must evolve into coordination hubs that link on two aspects: (i) provincial development plans with (ii) community realities. This will require vertical integration with state agencies and horizontal collaboration with non-governmental actors. Local officials must be trained in multi-stakeholder facilitation, evidence-based planning and the negotiation of tradeoffs between infrastructure expansion, cultural preservation and economic modernization [46-49].

For the KDMR community, decentralisation represents a historic opportunity to bring governance closer to the people, but only if local institutions are empowered, capacitated and held accountable. Neglecting this transition will risk repeating the same patterns of top-down misalignment that have historically constrained indigenous economic empowerment. Proactively preparing KDMR majority districts for decentralisation is therefore not only an act of administrative reform, but a foundational pillar for achieving inclusive and locally owned development outcomes by 2030 [50].

Demographic Transitions and Dependency Ratios

Sabah's population structure is distinctly youthful, with a large segment of its citizens under the age of 30. For instance, the Kadazan, Dusun, Murut and Rungus (KDMR) communities particularly in rural and semi urban areas, this demographic composition is even more pronounced. In principle, such a youthful population represents a latent demographic dividend: a potential surge in productivity, innovation and economic dynamism, provided that these young people are absorbed into productive and formal economic roles.

As of 2025, high youth dependency ratios within many KDMR households, characterised by a small number of earners supporting a large number of dependents are already beginning to strain economic resilience at the household level. Incomes remain stagnant while basic expenditures, especially for education, transportation, and digital access continue to rise. In families where only one or two members engage in regular wage labour or informal enterprise, the financial burden of supporting multiple school aged or unemployed dependents leads to difficult tradeoffs, such as early school dropout, child labour or migration to urban centres for unskilled work. This demographic pressure is further compounded by limited access to reproductive health education, uneven school completion rates and constrained access to post-secondary training opportunities. Left unaddressed, these conditions can entrench long term socio-economic dependency, increase vulnerability to poverty cycles and exacerbate community wide exclusion from mainstream development.

Gendered vulnerabilities also intensify within these dependency dynamics. Young KDMR women, in particular, face a dual burden: they are often expected to undertake unpaid care roles within extended households, while simultaneously lacking access to youth enterprise programs or formal employment pathways that recognise their specific needs. In many interior districts, adolescent girls and young women experience compounded exclusion of cultural, digital, economic factors resulting in disproportionately high rates of dropout, underemployment and early marriage. Without integrated gender sensitive programming, the demographic burden within KDMR communities will fall heavily along gender lines, thereby worsening pre-existing inequalities. Strategic foresight for 2025 to 2030 must recognise that mitigating these risks is not a question of social welfare alone, it is an economic priority. Policies aimed at reducing youth dependency ratios should focus on accelerating the productive inclusion of young KDMR individuals through three primary areas [51,52].

First, youth centric enterprise support must go beyond start-up grants to include long-term coaching, incubation models, cooperative business structures and mentorship networks anchored within the community. These models must be delivered in culturally relevant formats and linked to viable market ecosystems. Second, life skills education, including financial literacy, reproductive health, civic engagement and conflict resolution should be integrated into both formal and informal learning spaces. This empowers young people with the adaptive competencies necessary to navigate volatile labour markets and complex social environments [53].

Third, economic models must be explicitly designed to account for the needs and contributions of young women and adolescent girls. Gender-inclusive approaches must include safe mobility infrastructure, care support subsidies, training for non-traditional trades and policy safeguards that remove institutional barriers to young women's participation in both the informal and formal economies. Failure to activate the economic potential of this demographic segment will not only squander a key development opportunity, it will also increase the fiscal pressure on public services, constrain intergenerational mobility and intensify socio-political dissatisfaction. Conversely, by investing in youth as an economic asset rather than treating them as a developmental afterthought, Sabah can reorient the trajectory of the KDMR community toward resilience, productivity and long-term stability.

Recommended Strategies

Drawing upon the preceding analysis, this section presents actionable strategies to close structural employment gaps, improve enterprise scalability, and align policy frameworks with the evolving demographic and economic realities of the Kadazan, Dusun, Murut and Rungus (KDMR) communities. These recommendations are informed by empirical models, tested interventions, and cross sectoral benchmarks that have demonstrated measurable impact in similar socio-economic contexts [54-67].

Establish Community Based Workforce Development Hubs (CWDH)

To address the persistent mismatch between skills supply and labour market demand, the establishment of Community Based Workforce Development Hubs (CWDH) in KDMR majority districts should be prioritised. These hubs would function as decentralised, locally managed training and employment centres offering modular TVET, digital skills certification and job placement services tied directly to emerging sectors such as logistics, sustainable agriculture, renewable energy and digital content. For instance, in Sarawak, the Centexs Training Academy (Centre of Technical Excellence Sarawak) successfully upskilled rural youth in automation, mechatronics and solar technology, leading to over 65 percent job placement within six months of graduation. A similar model, tailored to Sabah's district level realities, could provide the KDMR workforce with a direct bridge to industry [68].

Mobilise a KDMR Enterprise Acceleration Fund (KEAF)

Entrepreneurship within the KDMR community is active but highly vulnerable due to capital shortages, lack of mentorship and informal operations. The state government, in collaboration with development finance institutions (e.g. SME Corp, PUNB), should launch a targeted and diversified, KDMR Enterprise Acceleration Fund (KEAF). This fund would provide risk-tolerant seed capital, business development services and digital market integration to early stage KDMR entrepreneurs, especially in agro-processing, halal products, tourism, logistics and online retail. In reflection, Indonesia's PNM Mekaar program, which supports micro entrepreneurs from low-income households through group-based lending and mentoring, has reached over 14 million women since 2015 and lifted household income levels by an average of 20 percent. A culturally adapted KEAF could replicate such outcomes for marginalised Sabahans, particularly in rural districts [25-28].

Institutionalise Participatory District Budgeting Mechanisms

To embed accountability and local ownership, Participatory Budgeting (PB) should be institutionalised at the district level, especially in Ranau, Tambunan and Nabawan where budget allocations historically bypass community input. Through PB platforms, local residents, youth and business owners can vote or deliberate on the allocation of selected development funds. In a similar juncture, Brazil's Porto Alegre PB model resulted in infrastructure developments that reflected actual community priorities, increasing public satisfaction and reducing corruption [55].

Whereas, in a Malaysian context, PB could be introduced through Local Action Councils (Majlis Tindakan Pembangunan Daerah) with digital dashboards and annual town halls to enable transparency.

Integrate Digital Literacy and Connectivity Expansion into All State Aid Programs Given the digital exclusion of many KDMR zones, all state and federal aid directed at employment or entrepreneurship should mandate a digital literacy component and be tied to broadband infrastructure development. Internet access must be treated not as a luxury, but as an enabling right for workforce participation and market access. For example, Rwanda's Digital Ambassadors Program, which trained youth to teach digital skills across rural communities, reached over 1 million citizens in under five years. Therefore, Sabah's Ministry of Science, Technology and Innovation (MOSTI) could adapt this model to deploy digital literacy trainers within KDMR communities, aligned with the JENDELA infrastructure expansion [69].

Establish a Sabah Indigenous Enterprise Registry (SIER) and Incubator

To formalise and strengthen the ecosystem for KDMR led businesses, a centralised Sabah Indigenous Enterprise Registry (SIER) should be created to document, track and support indigenous entrepreneurs. This registry should be linked to a stateled Business Incubation Network (BIN) offering shared services such as legal advisory, product design, packaging, digital marketing and logistics. New Zealand's Te Puni Kōkiri Māori Business Growth Support provides mentorship and infrastructure to Māori owned enterprises. Since 2019, firms in the program reported 30 to 50 percent revenue growth. Thus, Sabah could emulate this structure by embedding it within SEDIA or a new statutory body.

Embed Behavioural Nudges in Economic Incentives

Behavioural patterns such as risk aversion, fatalism or preference for informal work must be addressed using behavioural economics. Design state incentives that include default enrolment into TVET programs, milestone-based business grants and behavioural contracts that commit recipients to capacity building milestones. Thus, in a real-world application, Bangladesh's BRAC used small behavioural "nudges" (e.g., commitment letters, identity-framed messages) to improve TVET completion rates among rural youth by over 20 percent. Similar interventions in Sabah could dramatically increase program retention and outcomes among millennial KDMR participants.

Institutional Coordination through a State KDMR Development Council (SKDC)

Fragmentation of programs across ministries has led to duplicated efforts and diluted impact. The establishment of a Sabah KDMR Development Council (SKDC), comprised of public agencies, local leaders, business representatives and researchers would facilitate integrated planning, real time data sharing and joint program evaluation. In retrospect, South Korea's Presidential Committee for Balanced National Development serves a similar role in harmonising regional strategies. The SKDC should be chaired by the Chief Minister to ensure cross agency coordination and budget alignment [70].

Legal Amendments and Incorporation

This subsection elevates the recommended programmes from discretionary initiatives to enforceable obligations by embedding them into Sabah's legal framework. First, it proposes gazetting an Industrial Skills Attachment Agreement (ISAA), a subsidiary regulation under the Sabah Labour Ordinance and cross recognised by the Native Court to guarantee every KDMR trainee a minimum of 12 plus 12 months of paid industrial attachment, with sanctions for non-compliant employers.

Second, it calls for inserting a new Article 31A into the State Constitution to create a KDMR Enterprise Acceleration Fund (KEAF) Oversight Committee, legally safeguarded by the State Attorney General and mandating at least ten percent KDMR representation across participating financial institutions. Third, it recommends amending the Native Court Enactment 1992 to add Section 32, formally recognising "inclusive economic empowerment, development, and employability" as native welfare interests and empowering the Native Courts to mediate KDMR commercial matters. Collectively, these amendments lock in quotas, funding and accountability, ensuring that indigenous economic inclusion is not merely policy rhetoric but a statutory duty shared by state agencies, district authorities and government linked corporations.

Legally Binding MoU Framework for TVET Pathways

The proposed Industrial Skills Attachment Agreement (ISAA) transforms what is normally a discretionary memorandum of understanding into a semi statutory compact that binds all parties through subsidiary legislation. By anchoring the ISAA under the Sabah Labour Ordinance (Cap. 67) and cross registering it within the Native Court Enactment 1992, the State gains two critical advantages. First, the agreement acquires the force of law once gazetted, permitting the State Labour Department to impose penalties without lengthy civil litigation. Second, cross registration confers cultural legitimacy, as native chiefs become formal countersignatories thus, enabling community oversight and reinforcing trainee accountability.

Governance mechanics are deliberately tripartite. State skills agencies and district manpower offices assume responsibility for curriculum quality, trainee vetting and stipend disbursement, while accredited employers guarantee structured, competency-based placements aligned to national occupational skills standards. Native district chiefs provide attestation, ensuring each cohort's demographic integrity and building social licence among local communities that might otherwise distrust state-led programmes. Oversight is centralised through a Digital Apprenticeship Registry managed by the State Labour Department, allowing real time tracking of trainee placement status, completion rates and employer compliance.

The mandatory attachment window of twelve months embedded within training and a further twelve months post-graduation, serves multiple objectives. It satisfies employer demand for entry-level continuity; gives graduates the tenure needed to convert classroom skills into measurable productivity and materially raises the probability of permanent employment. A proposed Clause 7, "just-cause termination" requirement, adjudicated by the native court, protects trainees from premature dismissal yet gives employers a clear remedy for non-performance.

Incentive alignment is embedded through fiscal and regulatory sticks. Participating firms enjoy levy rebates, fast-tracked foreign worker quota approvals and bonus points in state procurement pre-qualification; but non-compliance triggers progressive sanctions culminating in removal from the Approved Employer Registry, a proposed, reputational and commercial penalty that large contractors, especially GLCs are keen to avoid. Small and medium enterprises receive a graduated compliance schedule with technical assistance, recognising their limited HR capacity while still compelling adherence over time.

Annual performance audits, tabled in the State Public Accounts Committee and published on an open-data portal may create corporate transparency and invite civil-society scrutiny.

Metrics include placement-to-completion ratio, post-attachment retention, wage progression and gender balance. This public reporting obligation mirrors the accountability architecture of Johor's Manpower Placement Agreement 2018, which measurably increased trainee retention and employer satisfaction; in Sabah's case the ISAA improves on the Johor model by legally embedding indigenous representation and native-law traceability.

To ensure sustainability, the ISAA mandates a one percent employer contribution to a Trainee Welfare and Innovation Fund (TWIF) administered by the State Labour Department. The fund underwrites trainee insurance, transport subsidies for rural placements and micro grants for trainee-led process improvements, further aligning employer interest with trainee success. Finally, the ISAA is intentionally drafted as a subsidiary legislation rather than a standalone ordinance to permit rapid amendment through ministerial regulation. This design choice future proofs the framework against sectoral shifts in Sabah's industrial base, facilitating swift recalibration of quota ratios, apprenticeship durations or sanction schedules without requiring full legislative cycles.

KEAF Committee Oversight: Article 31A

(A) Constitutional Architecture

The proposed Article 31A would sit before Article 32 of the Sabah State Constitution, which currently regulates procedures for supplementary and excess expenditure. By carving out a discrete provision, rather than amending Article 32 itself, the State preserves the existing fiscal framework while vesting the KDMR Enterprise Acceleration Fund (KEAF) the same constitutional status previously given to the state trust funds. This placement delivers two advantages: (i) earmarked protection as a constitutionally recognised fund, KEAF assets cannot be reappropriated without a two thirds majority of the State Legislative Assembly, insulating indigenous enterprise capital from annual budget volatility and (ii) federal non-conflict, locating the provision within Part III (Financial Provisions) avoids overlap with federal revenue provisions under Articles 112C and112D of the Federal Constitution, thereby eliminating the need for federal concurrence [55,56].

(B) Oversight Committee Mandate

A proposed Article 31A (2) empowers the KEAF Oversight Committee (KOC) to exercise fiduciary and supervisory control over all state-backed indigenous enterprise funds, whether newly constituted or subsumed from existing schemes (e.g., SEDCO's Bumiputera Micro Credit Pool). Specifically, the KOC is authorised to: (i) approve disbursements exceeding RM 1 million, (ii) issue investment policy guidelines and risk ceilings, (iii) appoint independent auditors under the State Financial Authorities and its regulations and (iv) suspend participating financial intermediaries for breach of fund covenants.

(C) Composition and Quorum

A proposed Article 31A (3) must stipulate that every participating institution such as Sabah Development Bank, SEDCO, Sabah Credit Corporation, Sabah Law Society and any future vehicle must delegate board level representatives, ten percent of whom must be bona fide KDMR professionals vetted by the Native Affairs Office. This guarantees indigenous voice at both policy and transactional levels. A statutory quorum of two thirds plus one is required for capital deployments above RM 5 million, ensuring minority safeguards while preserving decisional efficiency.

(D) Role of the State Attorney General (SAG)

Designated under a proposed Article 31A (4) as ex-officio legal guardian, the SAG would regulate on matters pertaining mainly in four areas: (i) certifies constitutional and statutory conformity of every KEAF instrument, (ii) vets term sheets, security agreements and concession deeds prior to execution and (iii) initiates recovery proceedings or injunctive relief in the event of fund misuse. This arrangement mirrors the fiduciary gatekeeping exercised by Crown Law in New Zealand's Māori Trust Boards model, thereby aligning Sabah's indigenous fund governance with international best practices.

(E) Governance Cycle and Disclosure

To institutionalise transparency, a proposed Article 31A(5) directs the KOC to produce an audited KEAF Impact Statement within 90 days of each fiscal year close. The statement must disclose, (i) net asset value, portfolio composition and default ratios, (ii) demographic and sectoral distribution of beneficiaries and (iii) socio-economic impact metrics (e.g., jobs created, revenue growth of funded enterprises). The state Minister of Finance is mandated to table the report in the State Assembly and an abridged version must be published on a public portal under the Sabah Open Data Policy, thereby satisfying both legislative scrutiny and corporate governance disclosure standards.

Amendment of Native Law to Embed Economic Inclusivity

A) Legislative Design and Placement

Subsequently, a proposed Section 32, "Economic Empowerment Mandate," would be inserted within Part VI of the Native Court Enactment 1992, and be read and enforced together with Section 30 which currently regulates powers to make rules of Native Courts. By situating the clause alongside provisions on marriage, inheritance and customary tenure, the amendment should formally elevate economic empowerment to the same level of native welfare as cultural and familial matters, thereby granting the courts clear authority to adjudicate economic questions that bear directly on community livelihood [25].

B) Substantive Context of Section 32

Paragraph 1: Recognition of Native Welfare Interests

The amendment must explicitly classify "inclusive economic empowerment, development and employability" as legitimate aspects of native welfare. This recognition obliges the Native Courts to interpret existing customary norms, such as communal land use and leadership roles, through a modern economic lens thereby, ensuring that traditional practices support, rather than hinder, income generation and enterprise formation [70].

Paragraph 2: Mediation Jurisdiction

Native Court panels are granted concurrent jurisdiction with civil courts for commercial disputes involving KDMR owned or majority-controlled enterprises up to an amount of RM 500,000. Proceedings follow expedited conciliation rules, blending restorative justice principles with commercial mediation standards. Awards are enforceable as Orders of the High Court upon registration, thereby reducing litigation costs and timelines [71].

Paragraph 3: Empowerment DIrectives to Native Chiefs

The Ketua Anak Negeri would receive a statutory duty to apply a "qualified priority" for KDMR applicants in recommending TVET bursaries, micro land leases for agro processing clusters and communal titles for regulated ecotourism concessions. Native Chiefs must certify that recommendations meet merit-based criteria; education, business viability and environmental compliance, before endorsement wherein, ensuring both inclusivity and competence [72].

Paragraph 4: Non-Discriminatory and Safeguard Provision
To maintain constitutional equality, preferential measures cannot infringe the rights of other Sabah citizens. All selections must respect merit, suitability, and transparent selection processes, echoing the safeguards contained in the Federal Constitution Article 153(1). This clause inoculates the amendment against potential legal challenges on grounds of discrimination [73].

C) Procedural Enforcement
A dedicated Native Court Economic Registry (NCER) will log all empowerment cases, bursary endorsements, and land lease recommendations. Quarterly summaries are forwarded to the State Attorney General's Chambers and the Ministry of Rural Development for oversight. Non-compliance by native chiefs, such as failure to apply priority rules or proven nepotism would inevitably trigger disciplinary hearings under the Native Court Enactment, with sanctions ranging from reprimand to suspension.

D) Capacity Building for Native Court Officers
The State Attorney General Chambers, in collaboration with the Sabah Law Society (SLS), will conduct certified courses on commercial mediation, financial literacy and environmental impact assessment for Native Court judges and clerks. This upskilling ensures decisions are both culturally consonant and economically sound.

E) Precedent and Comparative Insight
In observation, Sarawak's 2018 amendment to its Native Court Ordinance, which authorised the certification of social enterprise cooperatives, led to a thirty five percent increase in indigenous participation in renewable energy supply chains within the Sarawak Corridor of Renewable Energy (SCORE). Internationally, Canada's First Nations Commercial and Industrial Development Act (FNCIDA 2005) empowered band councils to approve on-reserve industrial projects, significantly accelerating indigenous equity stakes in energy ventures. These precedents demonstrate that legally empowering customary institutions can unlock capital flows and entrepreneurial growth without eroding cultural sovereignty.

Conclusion
This 2025 strategic analysis has shown that the economic marginalisation of the Kadazan, Dusun, Murut and Rungus (KDMR) communities is not the product of isolated shortcomings but of an interlocking lattice of structural, behavioural and institutional deficits that has persisted for decades. Left unchecked, these forces will harden into permanent exclusion as Sabah's economy accelerates toward 2030.

The brief demonstrates that existing programmes remain fragmented, top-down and only weakly aligned to on-the-ground realities. Consequently, employment stagnation, low enterprise scalability and policy fatigue continue to erode community confidence and economic mobility. Yet the analysis also identifies a clear window of opportunity: strategic decentralisation, targeted fiscal instruments, digitally inclusive service delivery and community driven entrepreneurship can reposition KDMR talent and enterprise as engines of Sabah's next growth cycle, provided action is taken immediately.

Central to that pivot is the suite of Legal Amendments and Incorporation outlined in Section 9.8. By codifying an Industrial Skills Attachment Agreement, entrenching the KDMR Enterprise Acceleration Fund under a new Article 31A of the State Constitution and amending the Native Court Enactment to embed economic empowerment, the state can convert policy aspiration into legally enforceable duty. These instruments lock in quotas, funding, accountability and culturally grounded oversight, ensuring that indigenous inclusion is shielded from political cycles and budgetary volatility.

Taken together, the operational roadmap and the legal architecture form both a call to action and a blueprint for durable structural change. Delivering on this vision will require more than innovative programmes, it demands governance accountability, cross sector coordination, and sustained investment in KDMR human capital. True empowerment will not arise from rhetoric or token gestures but from adaptive systems that acknowledge indigenous communities as co-architects of Sabah's economic trajectory. If the next five years are leveraged decisively, Sabah will not only close a historic equity gap; it will secure a resilient, competitive and inclusive foundation for growth through 2030 and beyond.

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