



Digital Empowerment and The Landscape of Technopreneurship in Sarawak: A Descriptive Study of Government Initiatives for Women Entrepreneurs

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ABSTRACT

This paper offers a descriptive and narrative account of the technopreneurship landscape in Sarawak, Malaysia, with particular attention to the state government's efforts to equip women entrepreneurs with digital skills. Anchored in the Sarawak Digital Economy Blueprint 2030 and the Post-COVID-19 Development Strategy 2030, the state has pursued a multi-agency approach involving the Ministry of Women, Family and Community Development, the Sarawak Digital Economy Corporation (SDEC), Tabung Ekonomi Gagasan Anak Bumiputera Sarawak (TEGAS), the Centre of Technical Excellence (CENTEXS), and a constellation of federal agencies, civil-society networks and international partners. Using a qualitative document-analysis methodology that synthesises government reports, policy blueprints, agency communications, news coverage and peer-reviewed literature, the paper traces the programmes launched, the delivery mechanisms used, and the documented responses of women entrepreneurs themselves. Findings suggest that structured programmes such as PERANTIS-PENDAYA, SME Digitise!, Kamek Digital, GoDigital Sarawak and DANAnita have produced measurable participation gains and largely positive testimonial feedback, particularly around social-media marketing, e-commerce onboarding and financial record-keeping. At the same time, persistent barriers around rural connectivity, digital confidence, market access and financing continue to temper the pace of digital transformation among rural and indigenous women entrepreneurs. The paper concludes with recommendations for deepening coordination among agencies, extending infrastructure to underserved districts, and embedding longitudinal monitoring of women-focused technopreneurship outcomes.

Keywords: technopreneurship, digital economy, women entrepreneurs, Sarawak, digital skills, SDEC, PERANTIS-PENDAYA

INTRODUCTION

Technopreneurship, the fusion of technology and entrepreneurship in which digital tools, platforms and infrastructure become the primary means of creating and capturing business value has emerged as a defining feature of Sarawak's economic transformation agenda. Since the launch of the Sarawak Digital Economy Blueprint 2030, the state government under the Premier of Sarawak has positioned digitalisation as a foundation for inclusive growth, targeting not only urban start-ups and established small and medium enterprises (SMEs) but also rural, grassroots and previously underserved segments of the population, including women micro-entrepreneurs.

Sarawak's technopreneurship landscape is distinctive within Malaysia for two reasons. First, it is geographically and demographically diverse, spanning a modernising urban corridor around Kuching, Miri and Sibü alongside a vast rural and highland interior inhabited predominantly by indigenous communities such as the Iban, Bidayuh, Orang Ulu and Melanau. Second, the state operates its own semi-autonomous digital economy apparatus most visibly through the Sarawak Digital Economy Corporation (SDEC) and the Sarawak Rural Broadband Network (MySRBN), that runs in parallel with, and sometimes independently of, federal digital economy agencies such as the Malaysia Digital Economy Corporation (MDEC). This dual structure has enabled Sarawak to design programmes tailored to its own population, including targeted efforts to bring women, particularly rural and indigenous women, into the digital economy.

Within this landscape, women entrepreneurs represent both an opportunity and a policy priority. Nationally, women-led micro, small and medium enterprises (MSMEs) constitute a substantial share of Malaysia's entrepreneurial base, with more than 242,000 women entrepreneurs recorded across industries (Sarawak Tribune, 2026). Yet women entrepreneurs, especially those operating informal or home-based businesses in rural Sarawak, have historically faced compounded disadvantages in accessing capital, markets, mentorship and digital tools. This paper examines how the Sarawak state government, in partnership with federal agencies, statutory bodies and civil-society organisations, has sought to close this gap through digital-skills programming, and how women entrepreneurs themselves have responded to these interventions.

Problem Statement

Despite the ambition articulated in Sarawak's digital economy policies, a persistent digital divide continues to separate urban and rural entrepreneurs, and a further gendered divide continues to separate men and women within the entrepreneurial population. Women entrepreneurs in Sarawak, particularly those from indigenous communities in rural districts such as Kampung Singai, Betong and the wider Bidayuh and Iban heartlands, report digital exclusion, weak branding capacity, restricted market access and limited support networks even as national policy frameworks such as the MADANI Economy and the MyDIGITAL Blueprint 2021–2030 pledge inclusive digital participation (Bakerya, 2025).

At the same time, empirical studies of Malaysian women entrepreneurs more broadly document a recurring set of constraints: limited access to start-up and growth capital, socio-cultural expectations that constrain time and mobility, uneven digital literacy, and inconsistent access to structured digital-skills training (Baker, 2025; Md Faudzi et al., 2024). Because Sarawak combines extreme geographic dispersion with a large indigenous rural population, these constraints are often magnified relative to Peninsular Malaysia. The state government has responded with an expanding portfolio of digital-empowerment programmes delivered through multiple agencies, yet the coordination, reach, and lived impact of these programmes on women entrepreneurs themselves remain under-documented in a single, integrated academic account. This paper addresses that gap by systematically describing the initiatives, the agencies executing them, and the responses of the women entrepreneurs who have participated in them.

Research Objectives

This paper is guided by four objectives:

- To describe the broader landscape and phenomenon of technopreneurship in Sarawak, including its policy foundations and institutional architecture.
- To identify and document the specific initiatives undertaken by the Sarawak state government to empower women entrepreneurs with digital skills.
- To map the government agencies and civil-society partners involved in executing these initiatives and to characterise their respective roles.
- To examine, through available testimonial and secondary evidence, how women entrepreneurs themselves have responded to these digital-empowerment initiatives, including perceived benefits and continuing challenges.



LITERATURE REVIEW

Technopreneurship and the Digital Economy in Sarawak

The Sarawak Digital Economy Blueprint 2030 frames technopreneurship as one of eleven strategic actions under its "Foundation for Digital Economy" pillar, which encompasses digital infrastructure and connectivity, human capital and digital talent, research and innovation, and inclusivity (Sarawak Digital Economy Blueprint 2030, as cited in AnyFlip, 2024). The blueprint explicitly targets the acceleration of digital skills within communities through mechanisms such as Digital Community Centres (DCCs) built on existing rural libraries, with a stated target of 44 centres operated jointly by the state library authority and the Ministry of Public Health, Housing and Local Government. This institutional design reflects a broader ICT-for-development (ICT4D) logic in which connectivity and skills infrastructure are treated as preconditions for entrepreneurial participation (Keling et al., 2025).

Complementary telecentre research on the Pusat Internet initiative implemented nationally by the Malaysian Communications and Multimedia Commission and present in rural Sarawak finds that sustained access to internet facilities and ICT training produces long-term socio-economic benefits, including enhanced personal growth, a narrower digital divide, better access to public services, and greater empowerment of women, although the same research cautions that infrastructure gaps, linguistic diversity and facility maintenance continue to limit impact (Keling et al., 2025).

Women Entrepreneurship and Digital Adoption in Malaysia

A growing body of Malaysian entrepreneurship literature examines the intersection of gender, digital adoption and small business performance. Baker (2025) reviews the role of socio-cultural factors and support systems in shaping women's entrepreneurial outcomes in emerging markets, concluding that governmental policy and non-governmental organisation support meaningfully shape the small-business landscape for women, even as cultural attitudes and family obligations continue to constrain participation. Related work on gender and Malaysian labour markets similarly finds that the absence of comprehensive anti-discrimination legislation leaves gendered disparities largely unaddressed in formal policy (Poon & Leeves, 2022), while qualitative studies of women's entrepreneurial narratives reveal continuing socio-cultural barriers embedded in everyday business practice (Ramli & Razak, 2023).

Technology adoption research grounded in the Technology Acceptance Model finds that low-income women entrepreneurs, including those in Sarawak, have increasingly integrated digital tools into daily operations most visibly through social-media marketing on platforms such as Facebook and WhatsApp, and through cashless payment systems such as DuitNow QR, Touch 'n Go, Boost, ShopeePay and Sarawak Pay a shift substantially accelerated by the COVID-19 pandemic (Md Faudzi et al., 2024). Complementary studies of urban women entrepreneurs in Kuala Lumpur likewise identify a lack of digital skill, rather than a lack of willingness, as the principal barrier to digital transformation, and call for structured digital-skills training, institutional support and partnership-based interventions (Hashim, 2026).

Indigenous and Rural Women Entrepreneurs in Sarawak

Sarawak-specific research adds an important indigenous and rural dimension to this literature. Bakerya (2025) documents how Bidayuh women entrepreneurs in Kampung Singai face digital exclusion, weak branding capacity, restricted market access and limited support networks despite national commitments to inclusive entrepreneurship. The study proposes a "3D-IMPAK" model centred on digital literacy, indigenous branding, and peer-based cooperative networks as a replicable framework for strengthening rural micro-entrepreneurship and argues that such interventions build resilience, enhance market competitiveness, and preserve cultural dignity in the digital era. This literature collectively suggests that while digital tools are increasingly accessible to Malaysian women entrepreneurs in principle, translating access into sustained, profitable digital business practice requires deliberate, localised and culturally attuned skills programming — precisely the gap that Sarawak's state-led initiatives, discussed in the following sections, attempt to fill.



METHODOLOGY

This paper adopts a qualitative, descriptive-narrative research design suited to mapping an evolving policy landscape rather than testing a causal hypothesis. Data were drawn from a systematic review of secondary sources collected between 2020 and 2026, comprising: (i) official state policy documents, principally the Sarawak Digital Economy Blueprint 2030; (ii) institutional communications and programme documentation from SDEC, the Ministry of Women, Family and Community Development, TEGAS, CENTEXS and MARA; (iii) contemporaneous news coverage of programme launches, ministerial statements and event proceedings; (iv) donor and civil-society programme reports, notably from The Asia Foundation and the U.S. Embassy-linked Academy for Women Entrepreneurs; and (v) peer-reviewed journal articles addressing women's entrepreneurship, digital adoption and technopreneurship in Malaysia and Sarawak specifically.

Sources were triangulated thematically around four categories: (a) policy and blueprint targets, (b) programme design and delivery agency, (c) participation scale and reach, and (d) participant-reported outcomes, drawing on testimonial statements published by implementing agencies and quotations attributed to women entrepreneurs in programme reports and news articles. Because much of the participant-response evidence available in the public domain is testimonial rather than derived from randomised or representative sampling, this paper treats such evidence as illustrative of documented sentiment rather than as statistically generalisable proof of programme effectiveness, and it flags this limitation explicitly in the discussion of findings.

FINDINGS AND DISCUSSIONS

The Landscape of Technopreneurship in Sarawak

Sarawak's technopreneurship ecosystem is anchored by SDEC, a government-owned corporation mandated to implement the state's digital economy initiatives (SDEC, n.d.-a). SDEC operates the Sarawak Rural Broadband Network (MySRBN), manages a Digital Innovation Hub and Digital Village in Samajaya, runs a Centre of Excellence for research and commercialisation, and coordinates the wider Sarawak Digital and Innovation Ecosystem (SDIE), which links co-working spaces, accelerators, incubators and funding partners across the state (SDEC, n.d.-b). The scale of this ecosystem was on display at the 8th International Digital Economy Conference Sarawak (IDECS25) in October 2025, which drew more than 10,000 delegates, 129 speakers and 202 exhibitors, and produced 22 strategic memoranda of understanding across artificial intelligence, connectivity, bioeconomy and green technology (SDEC, 2025a). The event also featured a dedicated SHE-TECH Asia Forum spotlighting women leaders in digital and green innovation, signalling that gender-inclusive technopreneurship is being positioned as part of the state's mainstream digital economy narrative rather than a peripheral programme (SDEC, 2025a).

State Government Initiatives to Empower Women with Digital Skills

The Sarawak government's most direct and long-running vehicle for empowering women entrepreneurs is the Ministry of Women, Family and Community Development (Kementerian Pembangunan Wanita, Kanak-Kanak dan Komuniti, KPWK), which has combined welfare support with structured entrepreneurship and leadership development. The PERANTIS programme (Program Perantisan Kepimpinan Wanita) is a nationwide leadership and capacity-building initiative that, by early 2026, had run 100 programmes involving 4,770 women participants across Malaysia, of which 11 programmes and 640 participants were in Sarawak alone (Borneo Post Online, 2026). A Sarawak-specific extension, PENDAYA (Program Pembinaan Kepimpinan dan Keusahawanan Wanita Dayak), targets Dayak women entrepreneurs specifically and is delivered in partnership with civil-society bodies such as the Women Empowerment Sarawak Network Association (WESNA) and the Dayak Chamber of Commerce and Industry (DCCI) (Borneo Post Online, 2026). At the January 2026 launch of a related leadership workshop, Minister Dato Sri Nancy Shukri framed digital empowerment as a matter of urgency, arguing that women must become creators, innovators and leaders in technology rather than remaining passive technology users (Borneo Post Online, 2026).

A second, earlier strand of ministry programming addressed more foundational needs. The Ministry of Women, Early Childhood and Community Wellbeing Development established Sarawak's first Women Entrepreneur



Empowerment Centre, offering Women Skills Training (WST) in stitching, culinary arts, beauty and spa services, alongside a RM500 KIRWaS (Ketua Isi Rumah Wanita Sarawak) allowance for women who are heads of households, and grants of up to RM10,000 with agency monitoring of business development (RAKAN Sarawak, 2023). A One Stop Collection Centre (OSCC), piloted in Kota Samarahan, was designed to aggregate, package, market and promote products from women micro-entrepreneurs, with an explicit focus on digital marketing and promotion to reach international markets as part of Sarawak's ambition to become a major food exporter by 2030 (RAKAN Sarawak, 2023).

At the level of chief ministerial policy, Premier Abang Johari Tun Openg has repeatedly linked women's economic empowerment to the digital economy transition. Launching the "Women X: Global Innovative Entrepreneurship Symposium" in conjunction with International Women's Day, he confirmed that the Ministry of Women would continue to develop women as digital entrepreneurs, and disclosed that the ministry was working with Tabung Ekonomi Gagasan Anak Bumiputera Sarawak (TEGAS) to train more women in the digital economy, and with the Centre of Technical Excellence (CENTEXS) to deliver entrepreneurship training using artificial intelligence, virtual reality and augmented reality (DayakDaily, 2020). He further announced plans for an entrepreneurs' incubator and training centre at Kota Samarahan aimed specifically at helping women entrepreneurs innovate their products and services (DayakDaily, 2020).

The Role of SDEC and Digital-Economy-Specific Programming

Where the Ministry of Women supplies welfare-linked and leadership-oriented programming, SDEC supplies the more technical, business-digitalisation layer, and increasingly serves women entrepreneurs through programmes that are gender-neutral in design but disproportionately taken up by women-led micro-enterprises. SME Digitise! is SDEC's flagship hand-holding digitalisation programme, running four months of training across six modules — including the Business Model Canvas and small-business accounting — followed by two months of mentoring, delivered across six locations in Sarawak and paired with a free electronic point-of-sale (ePOS) system (SDEC, n.d.-c). Participant testimonials published by SDEC illustrate concrete behaviour change: entrepreneurs in Serian reported that training in social-media engagement helped their products "sell out" more consistently after they applied trainer-recommended techniques, while other participants credited the Business Model Canvas and small-business accounting modules with helping them prepare the financial documentation needed to secure a government grant (SDEC, n.d.-c).

Beyond SME Digitise!, SDEC operates Kamek Digital, an onboarding initiative that helps entrepreneurs across Sarawak enter the digital marketplace, and GoDigital Sarawak, which provides grants for hardware and software to digitalise business operations (SDEC, n.d.-d). In February 2026, SDEC launched the Sarawak Digital Champion (SDC) Programme in collaboration with Angkatan Zaman Mansang Sarawak (AZAM), training grassroots digital champions across all 45 districts of Sarawak who are collectively expected to train a further 2,600 participants at community level, extending digital literacy into areas that formal training centres struggle to reach (SDEC, 2026). SDEC has also engaged directly with women-dominated community enterprises, including a 2024 visit to Jawatankuasa Agrokrif Borneo in Betong, a craft-and-skills committee established to nurture handicraft development particularly among women, where SDEC's Innovation and Entrepreneurship Department explored how the group's members could leverage the Sarawak Rural Broadband Network to strengthen their digital marketing capacity (SDEC, 2024a). More recently, SDEC's Sarawak Digital Mall initiative has run a TikTok Shop Live Selling Competition empowering 100 Sarawakian entrepreneurs through livestream-commerce training and digital sales mentorship (SDEC, 2025a), while joint webinars with the Ministry of International Trade, Industry and Investment (MINTRED) Sarawak and with Agensi Kaunseling dan Pengurusan Kredit (AKPK) have extended digital tax-compliance (e-Invoice) and financial record-keeping skills to entrepreneurs, including many women-run micro-businesses (SDEC, 2024b).

Financing Agencies and Federal-State Collaboration

Digital-skills training in Sarawak has been consistently paired with financing mechanisms, reflecting an understanding among implementing agencies that digital literacy alone does not guarantee business growth. The Sarawak Economic Development Corporation (SEDC) and the Ministry of International Trade and Industry provide micro-credit financing accessible to SME operators, including women entrepreneurs (DayakDaily,

2020). At the federal level, MARA's DANAnita scheme has directly benefited Sarawak women entrepreneurs, and forms part of MARA's Women and Community Empowerment Action Plan 2025-2030, launched in Kuching in December 2024, which sets out seventeen strategic initiatives to expand women's access to skills training, business financing and digital platforms for marketing products (Sarawak Tribune, 2026). The Malaysian Communications and Multimedia Commission's Pusat Internet telecentre network, though not a women-specific programme, has been documented as a significant contributor to digital inclusion and women's empowerment in rural Sarawak by providing baseline internet access and ICT skills training in areas where commercial connectivity remains limited (Keling et al., 2025).

International and civil-society partners have supplemented this state architecture. The Asia Foundation's Accelerate My Business programme, delivered with implementing partner StartupMalaysia and corporate partners Visa and AT&T, and endorsed by the federal Ministry of Entrepreneur and Cooperatives Development, has trained women-led MSMEs across Malaysia and Indonesia including participants from Batu Niah, Sarawak in digital marketing, financial management, cybersecurity, customer experience and logistics (The Asia Foundation, 2025). Earlier, the U.S. Embassy's Academy for Women Entrepreneurs (AWE), run in partnership with the Women Entrepreneur Network Association (WENA), included Sarawak among its participating states and reported that alumni developed greater self-confidence and successfully pivoted their businesses online during the COVID-19 pandemic (U.S. Embassy in Malaysia, 2022). Table 1 summarises the principal agencies and their respective roles.

Table 1: Government Agencies and Partners Involved in Digital Empowerment of Women Entrepreneurs in Sarawak

Agency / Body	Primary Mandate	Relevant Digital-Entrepreneurship Initiative(s) for Women
Ministry of Women, Family and Community Development, Sarawak (KPWK)	State-level policy and welfare oversight for women, family and community wellbeing	PERANTIS (Program Perantisan Kepimpinan Wanita); PENDAYA (Program Pembinaan Kepimpinan dan Keusahawanan Wanita Dayak); Women Skills Training (WST); One Stop Collection Centre (OSCC); KIRWaS household-head assistance
Sarawak Digital Economy Corporation (SDEC)	Government-owned corporation leading implementation of the Sarawak Digital Economy Blueprint 2030	SME Digitise!; Kamek Digital; GoDigital Sarawak; Digital Village Accelerator (DiVA); Sarawak Digital Champion (SDC) Programme; Sarawak Digital Mall / TikTok Shop livestream-commerce training
Tabung Ekonomi Gagasan Anak Bumiputera Sarawak (TEGAS)	Bumiputera economic fund focused on capacity building and micro-financing	Digital-economy training collaboration with the Ministry of Women to prepare women for online business
Centre of Technical Excellence (CENTEXS)	State technical training centre	AI-, VR- and AR-based entrepreneurship training in partnership with the state government
Sarawak Economic Development Corporation (SEDC) / Ministry of International Trade, Industry and Investment (MINTRED)	SME development and trade facilitation	Micro-credit financing for SMEs, including women-led digital businesses
Majlis Amanah Rakyat (MARA)	Federal Bumiputera entrepreneurship and education agency	DANAnita financing scheme; Women and Community Empowerment Action Plan 2025-2030 (17 strategic initiatives on digital platforms, financing and skills)



Malaysian Communications and Multimedia Commission (MCMC)	Federal ICT infrastructure and digital-inclusion regulator	Pusat Internet (telecentre) network providing rural connectivity and digital-literacy training that supports women's economic participation
Non-governmental / civil-society and international partners	Advocacy, mentorship and donor-funded programming	Women Empowerment Sarawak Network Association (WESNA); Dayak Chamber of Commerce and Industry (DCCI); The Asia Foundation's Accelerate My Business (with Visa, AT&T, StartupMalaysia); Women Entrepreneur Network Association (WENA) / U.S. Embassy Academy for Women Entrepreneurs (AWE)

Responses from Women Entrepreneurs

Documented responses from women entrepreneurs who have participated in these programmes are, on balance, positive, though they also reveal the specific, practical nature of the skills gaps being addressed. Participants in SDEC's SME Digitise! programme in Serian reported that applying trainer-taught social-media engagement techniques led their products to "sell out" more consistently as customers responded more quickly to livestreamed or posted content, while others described how learning the Business Model Canvas helped them explain their business model clearly to partners and lenders, and how more consistent monthly financial record-keeping enabled them to prepare the documentation required to successfully secure a government grant (SDEC, n.d.-c). A further participant testimonial noted that using a digital calendar tool helped an entrepreneur realise how full her business schedule had become, suggesting that time-management and productivity gains were an unanticipated but valued benefit of digitalisation training (SDEC, n.d.-c).

Similar sentiment appears in donor-programme reporting. An electrical-appliance retailer from Batu Niah, Sarawak, who inherited her father's business during the pandemic with no online presence, described the Accelerate My Business programme as having taught her how to market her business online and manage transactions using digital tools, and separately credited the programme with helping her improve product packaging and production-cost efficiency (The Asia Foundation, 2025). AWE alumni in an earlier cohort that included Sarawak participants reported gains in self-confidence as entrepreneurs and described how the programme helped them pivot their businesses online during the pandemic (U.S. Embassy in Malaysia, 2022).

At the same time, the peer-reviewed literature signals that these positive testimonials should not be read as evidence that digital barriers have been resolved. Bakery's (2025) study of Bidayuh women entrepreneurs in Kampung Singai found continuing digital exclusion, weak branding capacity and restricted market access despite national and state policy commitments, and proposed a structured, peer-network-based model precisely because ad hoc training exposure was judged insufficient to produce durable digital transformation.

Broader Malaysian evidence similarly finds that while most women entrepreneurs including those in Sarawak have adopted at least basic digital tools such as social-media marketing and cashless payment platforms (including the state-specific Sarawak Pay), this adoption is frequently shallow, concentrated in marketing rather than in more advanced e-commerce, logistics or data-driven business functions, and continues to be constrained by limited digital skill, access to capital, and socio-cultural expectations around women's time and mobility (Md Faudzi et al., 2024; Baker, 2025; Hashim, 2026).

Taken together, the evidence suggests a landscape of genuine but uneven progress: women entrepreneurs who gain access to structured, hands-on programmes such as SME Digitise!, PERANTIS-PENDAYA, DANAnita or Accelerate My Business report tangible skill gains and often attribute concrete business outcomes higher sales, successful grant applications, improved financial management to their participation. However, reach remains constrained by geography, programme capacity, and the persistence of structural barriers that digital-skills training alone cannot resolve, particularly for indigenous and rural women entrepreneurs operating furthest from Sarawak's urban digital infrastructure.



RECOMMENDATIONS

- Strengthen inter-agency coordination: Establish a joint monitoring mechanism linking KPWK, SDEC, TEGAS, CENTEXS, MARA and MCMC so that women entrepreneurs can move seamlessly from welfare-linked skills training (e.g., WST, PERANTIS-PENDAYA) into digital-economy-specific programming (e.g., SME Digitise!, Kamek Digital) and onward into financing (e.g., DANAnita, SEDC micro-credit), rather than encountering each agency as a separate silo.
- Prioritise last-mile rural connectivity and district-level delivery: Expand the Digital Community Centre network and the Sarawak Digital Champion Programme's district-level footprint so that indigenous and rural women entrepreneurs in areas such as Kampung Singai and the wider interior receive sustained, localised support rather than one-off outreach.
- Move beyond marketing-only digital adoption: Design follow-on modules that build on existing social-media competence to introduce e-commerce platform management, logistics, data-informed inventory decisions and cybersecurity, addressing the observed concentration of digital adoption in marketing alone.
- Embed peer-network and mentorship structures: Adopt models such as the 3D-IMPAK framework that combine digital-literacy training with indigenous branding support and peer-based cooperative networks, since evidence suggests network-based support is a significant determinant of women's entrepreneurial success.
- Institutionalise outcome measurement: Complement testimonial reporting with systematic, longitudinal tracking of participant business outcomes (revenue, formalisation, grant success, digital-tool retention) to allow rigorous evaluation of programme effectiveness across agencies and cohorts.
- Sustain and scale successful public-private-civil-society partnerships: Continue and expand collaborations such as Accelerate My Business and AWE, which bring international financing, mentorship and specialised modules (e.g., DHL's e-commerce specialisation) to complement state-run programming.

CONCLUSION

The technopreneurship landscape in Sarawak reflects a deliberate, multi-agency state strategy to translate digital economy ambition into inclusive economic opportunity, with women entrepreneurs identified as an explicit policy priority rather than an incidental beneficiary group. Through the Ministry of Women, Family and Community Development's leadership and welfare-linked programmes, SDEC's technical digitalisation and entrepreneurship infrastructure, and financing and training support from TEGAS, CENTEXS, SEDC, MARA and MCMC reinforced by civil-society and international partners such as WESNA, DCCI, The Asia Foundation and WENA Sarawak has built a comparatively dense institutional architecture for women's digital empowerment. The documented responses of participating women entrepreneurs are broadly encouraging, with many reporting improved sales, stronger financial management and greater confidence navigating the digital economy. Yet the peer-reviewed evidence base cautions against overstating this progress: indigenous and rural women entrepreneurs in particular continue to face digital exclusion, restricted market access and limited networks, indicating that Sarawak's digital-empowerment agenda, while substantial, remains a work in progress. Continued investment in coordinated, localised, and rigorously monitored programming will be essential if the state is to convert its digital economy blueprint into equitable technopreneurial outcomes for women across all of Sarawak, not only its urban centres.

REFERENCES

1. AnyFlip. (2024, January 22). SDE Blueprint 2030 book [Flip e-book]. <https://anyflip.com/seasm/kntv/basic/151-200>
2. Baker, R. (2025). Empowering Malaysian women entrepreneurs: Analyzing the role of socio-cultural factors and support systems in emerging markets. *Journal of Information and Knowledge Management*. <https://journal.uitm.edu.my/ojs/index.php/JIKM/article/view/6142>



3. Bakerya, N. S. S. (2025). Strengthening Bidayuh women entrepreneurs in Kampung Singai, Sarawak through the 3D-IMPAK model for rural transformation. *Advanced International Journal of Business, Entrepreneurship and SME's*, 7(26). <https://gaexcellence.com/aijbes/article/view/6216>
4. Borneo Post Online. (2026, January 3). Sarawak women urged to lead future as creators, innovators and tech pioneers. <https://www.theborneopost.com/2026/01/03/sarawak-women-urged-to-lead-future-as-creators-innovators-and-tech-pioneers/>
5. DayakDaily. (2020, March 7). Sarawak to empower women entrepreneurship through digital technology. <https://dayakdaily.com/sarawak-to-empower-women-entrepreneurship-through-digital-technology/>
6. Hashim, N. (2026, March 2). Adapting to transform: Digital challenges and strategies for women-entrepreneurs in Kuala Lumpur. *International Journal of Research and Innovation in Social Science*. <https://rsisinternational.org/journals/ijriss/view/adapting-to-transform-digital-challenges-and-strategies-for-women-entrepreneurs-in-kuala-lumpur>
7. Keling, W., et al. (2025). Assessing the socioeconomic and digital inclusion impacts of Pusat Internet in rural Sarawak, Malaysia. *The Electronic Journal of Information Systems in Developing Countries*. <https://doi.org/10.1002/isd2.70038>
8. Md Faudzi, M. S., Abu Bakar, L. J., & Ahmad, S. (2024). Breaking barriers: Investigating technology adoption in micro, small, and medium enterprises (MSMEs) among low-income women entrepreneurs in Malaysia. *PaperASIA*, 40(5b), 126-135. <https://doi.org/10.59953/paperasia.v40i5b.130>
9. Poon, W. C., & Leeves, G. D. (2022). Gender discrimination in the absence of discrimination laws: Evidence from Malaysia. *International Journal of Business and Society*, 23(2), 1025-1041. <https://doi.org/10.33736/IJBS.4856.2022>
10. RAKAN Sarawak. (2023, May 31). Sarawak's first women entrepreneur empowerment centre. <https://www.rakansarawak.com/v3/2023/06/01/sarawaks-first-women-entrepreneur-empowerment-centre/>
11. Ramli, A., & Razak, N. A. (2023). Gendered experiences in entrepreneurship: Socio-cultural barriers faced by women in Malaysia. *Business Perspectives and Research*. <https://doi.org/10.1177/22785337221087481>
12. Sarawak Digital Economy Corporation (SDEC). (n.d.-a). SDEC | Sarawak Digital Economy Corporation. <https://sdec.com.my/web/sdec-sarawak-digital-economy-corporation/>
13. Sarawak Digital Economy Corporation (SDEC). (n.d.-b). Sarawak Digital and Innovation Ecosystem. <https://sdec.com.my/web/sarawak-digital-and-innovation-ecosystem/>
14. Sarawak Digital Economy Corporation (SDEC). (n.d.-c). SME Digitise! <https://sdec.com.my/web/sme-digitise/>
15. Sarawak Digital Economy Corporation (SDEC). (n.d.-d). SME digital initiative. <https://sdec.com.my/web/sme-digital/>
16. Sarawak Digital Economy Corporation (SDEC). (2024a, March 19). SDEC visit to Jawatankuasa Agrokrif Borneo, Betong [LinkedIn post]. <https://www.linkedin.com/company/sdecberhad/>
17. Sarawak Digital Economy Corporation (SDEC). (2024b, March). Webinar on e-Invoice for Sarawak entrepreneur [LinkedIn post]. <https://www.linkedin.com/company/sdecberhad/>
18. Sarawak Digital Economy Corporation (SDEC). (2025a, November 3). Sarawak moves from policy to practice at IDECS25, driving regional leadership in ethical AI and green innovation. <https://sdec.com.my/web/2025/11/03/sarawak-moves-from-policy-to-practice-at-idecs25-driving-regional-leadership-in-ethical-ai-and-green-innovation/>
19. Sarawak Digital Economy Corporation (SDEC). (2026, March 11). SDEC launches Sarawak Digital Champion Programme to build grassroots digital entrepreneurs. <https://sdec.com.my/web/2026/03/11/sdec-launches-sarawak-digital-champion-programme-to-build-grassroots-digital-entrepreneurs/>
20. Sarawak Tribune. (2026, July). MARA's DANAnita scheme benefits 10 Sarawak women entrepreneurs. <https://www.sarawaktribune.com/maras-dananita-scheme-benefits-10-sarawak-women-entrepreneurs/>
21. The Asia Foundation. (2025, March 7). Accelerate My Business provides vital digital skills for 6000 women across Malaysia and Indonesia. <https://asiafoundation.org/accelerate-my-business-provides-vital-digital-skills-for-6000-women-across-malaysia-and-indonesia/>
22. U.S. Embassy in Malaysia. (2022, April 17). Press release: Empowering women to become independent and confident entrepreneurs. <https://my.usembassy.gov/pr-empowering-women-to-become-independent-and-confident-entrepreneurs/>