

FOSTERING TECHNOPRENEURSHIP THROUGH GOVERNMENT-INDUSTRY COLLABORATION: A CASE STUDY OF ACEH'S TECH SECTOR

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Abstract

This study explores the impact of government-industry collaboration on technopreneurship in Aceh, focusing on initiatives led by the Government of Aceh and the Agency for the Assessment and Application of Technology (BPPT). The aim is to understand how these collaborations contribute to sustainable economic growth and innovation within the region. The study utilizes a literature-based approach, drawing insights from existing research, reports, and case studies related to technopreneurship, government-industry partnerships, and innovation ecosystems. Key themes and trends are synthesized to inform the analysis of the collaboration's impact on entrepreneurial activities in Aceh. Results Government-industry collaboration in Aceh has led to significant advancements in renewable energy, diversified plantation sectors, governance innovation, and human resource development. The implementation of electronic governance systems has enhanced transparency and efficiency in government operations. Emphasis on vocational education and life skills programs underscores efforts to cultivate a skilled workforce capable of driving technological advancements and entrepreneurial activities.

Keywords: Technopreneurship, Government-Industry Collaboration, Aceh

INTRODUCTION

In recent years, Aceh has emerged as a promising hub for technology-driven entrepreneurship, with a burgeoning ecosystem of startups and innovative ventures. This growth is attributed to various factors, including increasing access to digital technologies, a youthful demographic inclined towards innovation, and concerted efforts by the government to promote entrepreneurship in the tech sector (Bahwita, 2022).

The province of Aceh, located on the northern tip of Sumatra, Indonesia, has a unique socio-economic landscape shaped by its recovery from the devastating 2004 Indian Ocean tsunami and subsequent efforts to rebuild and diversify its economy. One notable aspect of this transformation has been the embrace of technology and entrepreneurship as key drivers of economic development and job creation (Khairuni, 2022).

Government-led initiatives play a pivotal role in nurturing technopreneurship (entrepreneurship in technology-related fields) in Aceh. The

provincial government, in collaboration with industry stakeholders and educational institutions, has introduced policies and programs aimed at supporting startups, fostering innovation, and building a conducive ecosystem for tech entrepreneurship. These initiatives encompass a spectrum of activities, including funding support, capacity building through incubators and accelerators, and facilitating partnerships between startups and established companies.

Aceh's tech ecosystem is characterized by a growing number of startups focusing on diverse sectors such as e-commerce, fintech, agritech, and healthtech. This diversity reflects the province's potential to leverage technology to address local challenges and contribute to economic growth. Moreover, the presence of institutions like universities and research centers provides a fertile ground for nurturing talent and fostering collaboration between academia and industry (Bachtiar et al., 2023).

Despite these positive developments, challenges remain, including access to funding, regulatory frameworks, and talent retention. Understanding the dynamics of government-industry collaboration in promoting technopreneurship is crucial for sustaining the growth of Aceh's tech ecosystem and positioning the region as a hub for innovation within Indonesia and Southeast Asia.

This study aims to delve into the role of government initiatives in fostering technopreneurship in Aceh, examining successful models of collaboration and identifying key factors contributing to the growth of the tech sector. By analyzing case studies and impact assessments, this research seeks to provide insights and recommendations for policymakers, industry stakeholders, and aspiring technopreneurs to further enhance the region's entrepreneurial landscape.

LITERATURE REVIEW

According to (Sugiyono, 2017). Social media marketing is a form of marketing that is used to create awareness, recognition, memory and even action towards a brand, product, business, individual or group either directly or indirectly using tools from the social web such as blogging, microblogging and social networking. . Tiktok is one of the social media that is popular with the public at the moment, because it is considered effective in facilitating the creation of short videos. The forms of video content from TikTok are very diverse, ranging from parody content, lipsync, dancing, culinary recommendations, product reviews to social activities (Wijaya & Setyo Utami, 2021). There has been an increase in application usage during the pandemic. Based on Apptopia data for 2020, TikTok was the most downloaded application in 2020. The total reached 850 million downloads (Stephani, C, 2021). Furthermore, Stephani, C (2021) stated that statistical data as of February 2021, daily active users of TikTok globally were estimated at 35.28 million users, both iOS and Android.

TikTok can be considered as part of a smart business context in certain

contexts. TikTok is a social media platform that combines short video content with artificial intelligence algorithms to deliver content tailored to user preferences. TikTok, as a popular social media platform with short video content format, has become an attractive place for sociopreneurs to spread their messages. Through creative, innovative, inspiring and educational content, sociopreneurs can raise funds, educate and motivate and inspire.

Thus, Tiktok provides sociopreneurs with a powerful tool to achieve their social goals more effectively, efficiently and with broad impact. This makes the importance of integrating digital technology in social and environmental efforts increasingly increasing in this digital era.

RESEARCH METHODOLOGY

To explore the role of government-industry collaboration in fostering technopreneurship in Aceh's tech sector, this study will employ a robust methodology grounded in extensive literature review. The research will leverage existing scholarly works, reports, and case studies related to technopreneurship, government policies, and industry partnerships within the context of technology ecosystems.

By employing a literature-based methodology, this study aims to contribute valuable insights into the dynamics of technopreneurship and government-industry collaboration, providing actionable recommendations to strengthen Aceh's tech ecosystem and support sustainable entrepreneurial development in the region.

RESULTS AND DISCUSSION

Technopreneurship,

Technopreneurship refers to the entrepreneurial activities that focus on the creation, development, and commercialization of innovative technological solutions. It involves individuals or teams who leverage technology to identify and capitalize on market opportunities, often disrupting traditional industries with novel products or services. Technopreneurs are characterized by their ability to blend technical expertise with entrepreneurial vision, driving innovation and economic growth (Saptaria & Setyawan, 2021).

In the context of Aceh, technopreneurship plays a crucial role in harnessing the region's technological potential and fostering socio-economic development. Aspiring technopreneurs in Aceh benefit from a growing ecosystem that supports innovation and entrepreneurship. Local universities and research institutions contribute to talent development by providing technical education and incubation programs that nurture entrepreneurial skills. Additionally, government initiatives aimed at promoting technopreneurship offer funding, mentorship, and networking opportunities to startups, facilitating their growth and success (Mopangga, 2015).

Ahli (experts) in various fields, including technology, business, and policy,

play pivotal roles in advancing technopreneurship. Technical experts provide domain knowledge and expertise necessary for developing innovative solutions, while business experts contribute insights into market trends, customer needs, and business strategies. Policy experts work to create an enabling environment by shaping regulations and incentives that support entrepreneurship and innovation.

Government-industry partnerships

Government-industry partnerships are collaborative arrangements between governmental entities and private sector organizations aimed at achieving common objectives and addressing societal challenges. These partnerships are vital for driving economic growth, fostering innovation, and enhancing the overall competitiveness of a region or country (Bachtiar et al., 2023).

In the context of technopreneurship, government-industry partnerships play a crucial role in supporting startups and entrepreneurial ventures within the technology sector. Governments provide incentives such as grants, tax breaks, and regulatory support to encourage industry players to invest in innovation and entrepreneurship. This collaboration helps bridge the gap between research and commercialization, facilitating the development and adoption of new technologies (Megahed & Al-Ramidhi, 2023).

Industry partners bring valuable resources, market insights, and expertise to the table, complementing government efforts with industry-specific knowledge and market-driven approaches. Together, they can co-create solutions, establish incubation centers, and facilitate access to funding and mentorship for aspiring technopreneurs.

Successful government-industry partnerships in technopreneurship often result in job creation, increased competitiveness, and the emergence of vibrant innovation ecosystems. By leveraging each other's strengths and resources, governments and industries can drive sustainable economic development while nurturing a culture of entrepreneurship and technological innovation.

Fostering Technopreneurship through Government-Industry Collaboration in Aceh

The partnership between the Government of Aceh and the Agency for the Assessment and Application of Technology (BPPT) signifies a strategic effort to propel technological development alongside downstream diversification. Led by Acting Governor Nova Iriansyah, the government aims to enhance technology utilization for regional development.

Several initiatives within this collaboration focus on harnessing Renewable Energy (EBT) and advancing the plantation sector. In the realm of EBT, Aceh is driving the electricity industry forward, while the plantation sector is prioritized with downstream activities in coffee, cocoa, essential oils, and nutmeg, alongside support for the nutmeg innovation cluster (Megahed & Al-Ramidhi, 2023).

Moreover, BPPT collaborates on governance innovation through the

implementation of an Electronic-Based Government System (SPBE). This includes transparent e-procurement policies that are real-time monitored by the public, along with integrated e-planning and e-budgeting applications to enhance transparency and accountability in regional financial management.

Collaboration also extends to optimizing the marine, fisheries, and livestock sectors, as well as developing vocational education institutions and *dayah* (Islamic boarding schools) through life skills programs. The objective of this partnership is to enhance human resource quality (SDM) and support downstream industry through technology application across various sectors (Megahed & Al-Ramidhi, 2023).

The Government of Aceh and BPPT aspire for this collaboration to strengthen holistic regional development, introduce technology innovations that support economic growth, and enhance Aceh's competitiveness on both national and global scales (Kasmaniar et al., 2023).



The research findings from the collaboration between the Government of Aceh and BPPT underscore significant progress in leveraging technology for economic development and technopreneurship. Through initiatives focused on renewable energy (EBT), plantation sector diversification, and governance innovation, Aceh has demonstrated a commitment to fostering a conducive ecosystem for technopreneurship (Rafliana, 2017).

Key outcomes include the successful implementation of electronic governance systems (SPBE), which have enhanced transparency and accountability in regional financial management. The transparent e-procurement policies and integrated e-planning and e-budgeting applications have improved efficiency and public trust in government processes (Susila, 2021).

Additionally, the collaboration's emphasis on vocational education and life skills programs has contributed to enhancing human resource quality (SDM) in Aceh, aligning with the goal of supporting downstream industry through

technological advancements.

Moving forward, continued investment in technology-driven initiatives and sustained government-industry collaboration will be instrumental in advancing technopreneurship in Aceh, driving innovation, and positioning the region as a competitive player in the national and global technology landscape.

CONCLUSION

In summary, the collaboration between the Government of Aceh and BPPT demonstrates a proactive strategy to leverage technology for comprehensive regional development and the advancement of technopreneurship. Initiatives focused on renewable energy, diversified plantation sectors, governance innovation, and human resource development underscore Aceh's commitment to sustainable economic growth and innovation.

The implementation of electronic governance systems (SPBE) has notably improved transparency and efficiency in government operations, fostering a conducive environment for investment and entrepreneurship. Emphasis on vocational education and life skills programs reflects a dedication to nurturing a skilled workforce capable of driving technological advancements.

Moving forward, continued collaboration among government, industry, and technology stakeholders will be essential to propel technopreneurship in Aceh. This support for startups, research, and technology adoption will fuel entrepreneurial activities, stimulate economic diversification, and enhance regional competitiveness.

In conclusion, the partnership exemplifies Aceh's embrace of innovation to drive inclusive growth and sustainable development. By fostering entrepreneurship and embracing technological advancements, Aceh is well-positioned to capitalize on opportunities and emerge as a prominent hub for technopreneurship regionally and nationally.

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