

A Systematic Review of Entrepreneurship Development in Coastal Communities: Implications for Women's Empowerment in the Bajo Tribe in Waktobi Regency

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Abstract.

This study looks at how entrepreneurship develops in coastal communities. The method uses bibliometric analysis of academic literature from the Scopus database from 2004 to 2024. This approach helped identify patterns, key themes and relationships in the study of entrepreneurship in coastal areas. The data were analysed using software such as RStudio, VOSviewer, and CiteSpace to show trends, networks, and how concepts change in the literature. The most discussed topics were climate change, tourism and sustainable development. The issue of women's empowerment and the role of micro, small and medium enterprises (MSMEs) received more attention in recent years. The research also found that coastal entrepreneurship is becoming more holistic, integrating social, economic and environmental aspects. This research shows that public policies should support entrepreneurship in coastal communities, especially those involving women. However, this study only looked at a few coastal communities, so the results may not apply to other areas. Further research is needed to cover more areas and compare different coastal communities.

Keyword: Climate Change, Coastal Communities, Entrepreneurship Development and Women's Empowerment.

I. INTRODUCTION

Coastal communities play a critical role in many countries' economic and environmental sustainability, yet they face unique challenges due to their geographic location and dependence on marine resources (Hamid et al., 2021). Entrepreneurship has emerged as a key driver for improving these communities' economic resilience and livelihoods, particularly in the face of environmental degradation, climate change, and fluctuating marine yields (Dhahri & Omri, 2018). As entrepreneurship evolves in coastal regions, understanding the dynamics, trends, and structures of entrepreneurial activity in these areas becomes increasingly important (Mikhaylov, 2019). This research explores entrepreneurship development in coastal communities by mapping emerging trends, analyzing network structures, and studying the evolution of entrepreneurship themes to provide insights into sustainable economic growth.

Despite the growing interest in entrepreneurship as a solution to economic challenges in coastal areas, limited empirical research thoroughly examines the trends and evolution of entrepreneurial activities in these regions (Halim et al., 2015; Xie et al., 2020; Xu & Yang, 2016; Zhang et al., 2022). Many coastal communities struggle with limited access to markets, lack of infrastructure, and vulnerability to environmental risks, all hindering their entrepreneurial potential (Vasseur, 2021). This research seeks to address these challenges by analyzing recent patterns of entrepreneurship development, identifying the factors that influence growth, and providing a comprehensive map of the entrepreneurship network within coastal regions.

While previous studies have highlighted the importance of entrepreneurship in rural and coastal areas, there remains a gap in understanding how entrepreneurship in coastal communities evolves, particularly about external factors such as climate change, policy changes, and market shifts (Castillo et al., 2023; Mochklas et al., 2024; Ranjan, 2015; Xie et al., 2020). Theoretical frameworks such as social network, resource-based, and institutional theories have been applied to entrepreneurship research in various contexts, but their application to coastal communities remains underexplored (Fortunato & Mclaughlin, 2012; Zvarych & Zvarych, 2023). This study will apply these theories to examine how social

and economic networks within coastal community shape entrepreneurial development and how resources and institutional support contribute to or hinder this growth. The study aims to provide a deeper theoretical understanding of entrepreneurship in coastal environments by addressing this gap.

To address these gaps, this research will use a mixed-methods approach that combines qualitative and quantitative data to map entrepreneurship trends and network structures within coastal communities. The study will use network analysis to examine the relationships and structures that support entrepreneurial activity, while longitudinal analysis will capture the evolution of these trends over time. In addition, interviews with local entrepreneurs and stakeholders will provide a contextual understanding of the challenges and opportunities in these communities. This comprehensive approach is designed to provide actionable insights for policymakers, development agencies, and local entrepreneurs seeking to promote sustainable entrepreneurship in coastal regions.

This research is motivated by the need to better understand the dynamic processes that underpin entrepreneurship in coastal communities. Specifically, it seeks to answer the following research questions: (1) What is the trend of emerging entrepreneurship development issues in coastal communities in recent years? (2) What is the structural map and network of entrepreneurship development in coastal communities? (3) How is the development of entrepreneurship development issues in coastal communities? These questions aim to bridge the gap between theoretical insights and practical applications and provide a clearer picture of the entrepreneurial landscape in these vulnerable yet economically vital areas.

The primary objective of this research is to map the trends and evolution of entrepreneurship development in coastal communities. The objectives are: (1) identify key trends in entrepreneurship development in coastal areas; (2) analyze the structure and network of entrepreneurship development within these communities; (3) examine how entrepreneurial activities have evolved in response to environmental, social, and economic changes; and (4) provide recommendations for fostering sustainable entrepreneurial ecosystems in coastal regions.

This research will contribute significantly to understanding entrepreneurship in coastal communities by providing a detailed map of entrepreneurial trends, structures, and networks. It will provide practical insights for policy makers, development organizations, and local governments on supporting and fostering entrepreneurship in these areas. It will also offer a theoretical contribution by applying and extending established entrepreneurship theories in the unique context of coastal communities, which can be used in future research and development programs to enhance these regions' resilience and sustainability.

II. METHODS

Research Design.

This research adopts a scientometric review design (Barbu et al., 2022; Strielkowski et al., 2022) to map the trends and evolution of entrepreneurship development in coastal communities. The scientometric review provides a systematic approach that combines quantitative analysis of relevant academic literature, allowing the understanding of the evolution of the topic in a measurable way (Jacob et al., 2019; Ma & Christensen, 2020). Through bibliometric analysis of key publications, this study identifies patterns, key themes, and relationships between emerging concepts in the study of entrepreneurship in coastal areas (Lawelai et al., 2023). By using this method, the research reveals the evolution of themes, networks, and publication trends that shape the development of entrepreneurship in coastal regions.

Data source

The data for this study were extracted from the Scopus database, covering publications from 2004 to 2024. The selection of publications focused on journal articles written in English to ensure high quality and internationally recognized literature for analysis. The 20-year timeframe was chosen to provide a comprehensive view of the longitudinal development of entrepreneurship in coastal communities. The Scopus database was selected for its extensive coverage of scholarly literature, ensuring the inclusion of diverse, reputable sources from multiple disciplines and providing a thorough representation of the evolution of the topic.

Data Collection Technique

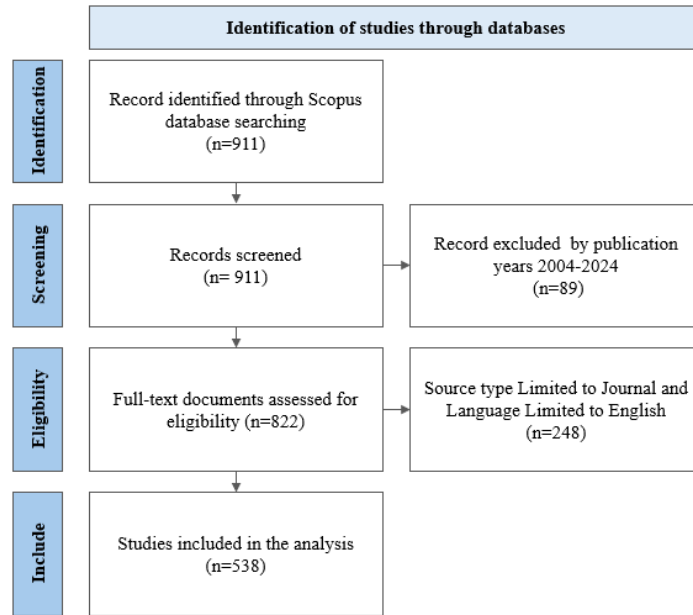


Fig 1. Modified PRISMA diagram illustrating the item selection process

Figure 1 illustrates the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology employed in this study to guide the data collection and filtering process (Wang et al., 2019). Initially, 911 documents were identified from the Scopus database based on the search query focused on entrepreneurship and coastal development. After filtering for English-language journal articles, the number of documents was reduced to 627. Further refinement based on article type and publication years between 2004 and 2024 resulted in 538 documents. These steps ensured the inclusion of high quality and relevant literature in accordance with the PRISMA guidelines, thereby enhancing the transparency, credibility and reproducibility of the review.

Data analysis technique

Data analysis was conducted using scientometric software tools such as RStudio, VOSviewer, and CiteSpace to visualize the trends, networks, and evolution of entrepreneurship development in coastal communities (Lawelai, 2023; Lawelai & Nurmandi, 2023). This approach enables the mapping of key concepts, themes, and keywords from the literature, illustrating how the topic has evolved over time and how different issues interact with each other. The analysis also reveals links between entrepreneurship, policy and sustainable development in coastal areas. By visualizing these trends, the study provides deeper insights into the dynamics shaping entrepreneurship in coastal communities and highlights potential future research directions for the field.

III. RESULT AND DISCUSSION

Research Trends



Fig 2. Word Cloud Coastal Entrepreneurship Development

Figure 2 shows that coastal entrepreneurship development includes but is not limited to climate change, sustainable development, and coastal communities. The size of the words in the word cloud indicates the frequency with which each topic is discussed in the literature or research. Topics such as “climate change,” “tourism,” and “sustainable development” are among the most frequently discussed. The overarching theme of this research substantiates a strong correlation between climate change and entrepreneurship development in coastal communities, particularly in the context of tourism, sustainability, and adaptation to environmental change.

The findings indicate that climate change and sustainable development significantly affect entrepreneurship development in coastal regions. The research underscores the necessity for innovation and adaptation to coastal communities' challenges, including rising sea levels, environmental degradation, and vulnerability to natural disasters. Furthermore, ecotourism and social entrepreneurship have emerged in response to the necessity of establishing sustainable economic opportunities for communities whose livelihoods depend on natural resources.

The findings of this study align with those of several previous studies that emphasize the importance of community-based entrepreneurship in addressing environmental challenges in coastal areas (Mochklas et al., 2024; Wang & Peng, 2020). However, this study contributes to the existing literature by elucidating the interrelationship between entrepreneurship development, ecological sustainability, and climate change. In contrast to previous studies focusing on individual solutions, this study offers a more comprehensive perspective by integrating social, economic, and environmental dimensions to promote sustainable economic development in coastal communities.

Table 1. Trend Topic Development of Entrepreneurship in Coastal Communities

Topic	freq	year q1	year med	year q3
climate change	22	2013	2018	2021
tourism	18	2012	2014	2020
entrepreneurship	16	2014	2020	2021
sustainable development	14	2021	2022	2023
gis	13	2007	2011	2013
sustainability	12	2016	2021	2024
coastal communities	11	2018	2022	2024
vulnerability	10	2013	2016	2020
fisheries	9	2016	2020	2020
gender	9	2020	2021	2022
smes	8	2012	2018	2022
women	8	2017	2018	2020

Table 1 shows entrepreneurship-related discourse within coastal communities, exhibiting varying frequencies and temporal distributions. The number of topic frequencies indicates the intensity of discussion or attention given to each topic over a specified period. The most frequently discussed topic was climate change, with 22 occurrences, followed by tourism (18 times) and entrepreneurship (16 times). This finding corroborates the assertion that climate change and tourism are two pivotal issues of paramount importance in the context of entrepreneurship development in coastal communities, given their profound impact on the economic and environmental viability of the region.

The results of this study demonstrate that the development trend of topics related to entrepreneurship in coastal communities encompasses environmental issues such as climate change and sustainable development, as well as technological aspects such as GIS (Geographic Information System), which has been discussed since 2007. Moreover, the discussion has highlighted the significance of sustainability and vulnerability as key themes, particularly in light of the emergence of novel challenges about environmental and socio-economic risks in coastal regions. This reflects an integrative effort to link social, economic, and ecological factors in the context of coastal entrepreneurship development.

The findings of this study, in conjunction with those of previous research, substantiate the assertion that climate change and tourism represent a significant area of focus within the extant literature on entrepreneurship in coastal areas (Anirban, 2020; Craig et al., 2019; Gupta et al., 2018). However, this research also addresses a gap in previous studies by introducing topics that have received less attention, such as the use of GIS and the role of gender in coastal entrepreneurship development. While previous

studies have focused more on economic and environmental aspects separately, the findings provide a more holistic perspective, especially by incorporating technological and gender dimensions as an important part of a sustainable entrepreneurship development strategy in coastal areas.

Table 2. Top Topic with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	2004 - 2024
coastal zones	2005	3.22	2007	2012	[Timeline visualization]
human activity	2009	4.15	2009	2012	[Timeline visualization]
conservation management	2011	3.46	2011	2013	[Timeline visualization]
pacific ocean	2013	3.26	2013	2020	[Timeline visualization]
fishery management	2014	3.7	2014	2022	[Timeline visualization]
small and medium sized enterprise	2010	5.17	2015	2024	[Timeline visualization]
entrepreneur	2017	4.6	2017	2024	[Timeline visualization]
innovation	2009	3.45	2017	2022	[Timeline visualization]
empowerment	2018	5.89	2018	2024	[Timeline visualization]
sustainability	2006	3.65	2019	2024	[Timeline visualization]
business development	2016	3.29	2019	2024	[Timeline visualization]
sustainable development	2005	6.1	2020	2024	[Timeline visualization]

Table 2 shows numerous topics that exhibit pronounced citation bursts over specific time intervals. The topic of sustainable development exhibits the highest citation burst strength, 6.1, with the period commencing in 2020 and continuing until 2024. Similarly, other topics, including “small and medium-sized enterprise” (5.17), “empowerment” (5.89), and “entrepreneur” (4.6), also exhibited strong citation bursts, indicating a notable increase in research attention devoted to these subjects in recent years. A citation spike denotes a sudden surge in the number of citations to a specific topic, reflecting the heightened relevance and attention accorded to that topic by the scientific community during the corresponding period.

The findings of this study show that despite the prevalence of certain topics, such as climate change and tourism, in Table 1, this does not necessarily indicate a significant citation spike, as observed in Table 2. To illustrate, the subjects of “empowerment” and “small and medium-sized enterprises” have been the subject of more recent citation attention than other subjects, such as “climate change,” despite the latter's higher frequency of appearance in Table 1. This indicates that a topic's scientific relevance and influence within the research community may fluctuate based on the temporal context and the level of urgency perceived by researchers and policymakers.

The findings of this study confirm that the literature on entrepreneurship in coastal communities is increasingly expanding its focus beyond environmental issues such as climate change and conservation to encompass social and economic aspects such as community empowerment and small and medium enterprise development (Rahim et al., 2018; Walsh & Hall, 2022). This addresses a gap in the existing literature, which has tended to focus on environmental or technological issues, and provides new insights into the importance of social and economic factors in supporting sustainable development in coastal areas. It also demonstrates a shift in research focus towards more inclusive and community-based issues of empowerment and entrepreneurship, thereby offering new directions for future policy development and interventions.

Network Analysis

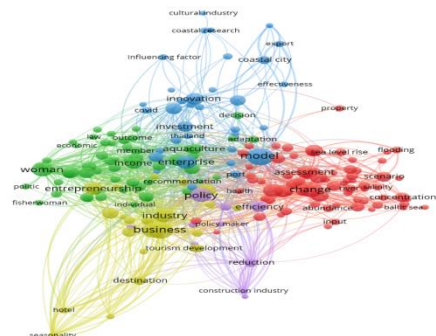


Fig 3. The Network's Entrepreneurship Development Theme for Coastal Communities

Figure 3 shows that this network of research topics is divided into several interconnected clusters. The green, blue, red, and purple clusters represent different research topics related to entrepreneurship development in coastal communities. The thickness of the nodes indicates the frequency of occurrence of a topic in the literature, with thicker nodes representing topics that are more frequently discussed or have high relevance. The most connected network of issues comes from the themes of business, industry, and entrepreneurship, confirming that the focus of this research strongly emphasizes the economic aspects of entrepreneurship development in coastal communities.

The results show that climate change, policy, adaptation models, and business and innovation are the most dominant and interrelated topics in the research network on entrepreneurship development in coastal areas. Business and entrepreneurship issues are closely linked to social and environmental themes such as gender, public policy, and risk assessment, suggesting strong links between the business sector and environmental and social challenges in coastal areas.

The findings of this study add new insights to the existing literature by demonstrating an integration between business, innovation, and environmental change that has rarely been discussed in depth in previous studies. Previous studies have focused more on economic and business aspects without considering the complexity of the relationship between environmental adaptation and public policy (Owusu et al., 2024; Ünsal, 2024). Thus, this study fills the gap by offering a multidimensional perspective that links social, economic, and ecological issues in the context of entrepreneurship development in coastal communities, providing new directions for further research and more holistic policy development.

Mapping Research Topic

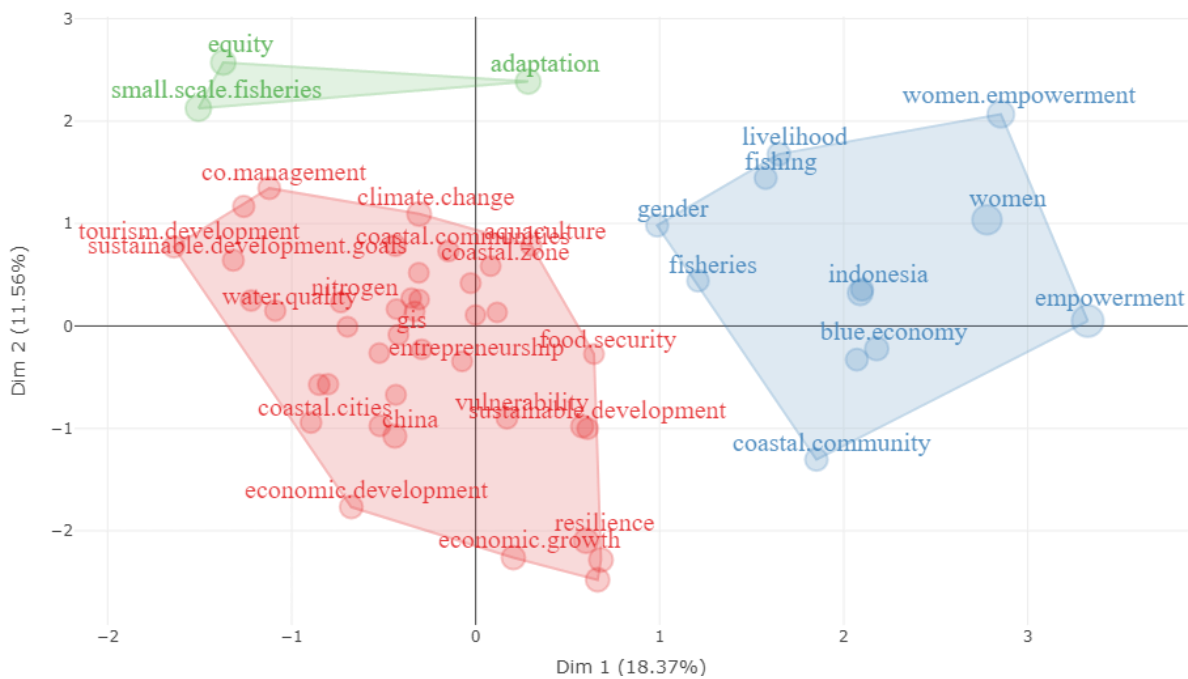


Fig 4. Conceptual Structure Map of Entrepreneurship Development in Coastal Communities

Figure 4 shows that the topic map is divided into three main clusters: green, red, and blue. Each cluster shows the conceptual relationship between topics that often co-occur in the literature on entrepreneurship development in coastal communities. The green cluster is related to the themes of “equity” and “small-scale fisheries,” indicating a focus on equity issues and small-scale fisheries. The red cluster is closely related to the themes of 'climate change', 'co-management' and 'tourism development', highlighting environmental challenges and resource management. The blue cluster focuses on women's empowerment, gender, and livelihoods, highlighting aspects of social and economic empowerment in coastal communities. This thematic structure confirms that research on entrepreneurship in coastal communities covers various factors, including environmental challenges, social empowerment, and sustainable economic development.

The results of this study show a strong relationship between climate change resource management and entrepreneurship development in coastal communities. Meanwhile, gender empowerment and livelihoods also play an important role in supporting the economic and social well-being of coastal communities. This shows that entrepreneurship in coastal communities is not only focused on economic aspects, but also includes interrelated social and environmental elements. Each cluster in this conceptual map reflects a different but complementary research focus to create an inclusive and sustainable development strategy.

The findings of this study confirm that the literature on coastal entrepreneurship is evolving towards a multidimensional approach that incorporates environmental, social and economic issues (Gupta et al., 2018; Halim et al., 2015). Previous studies have paid more attention to environmental and economic aspects separately. However, this study provides new insights by combining the three aspects holistically, suggesting that a comprehensive approach is needed to address the challenges faced by coastal communities. As such, this research extends the scope of previous literature and provides new directions for the development of more comprehensive and sustainable policies.

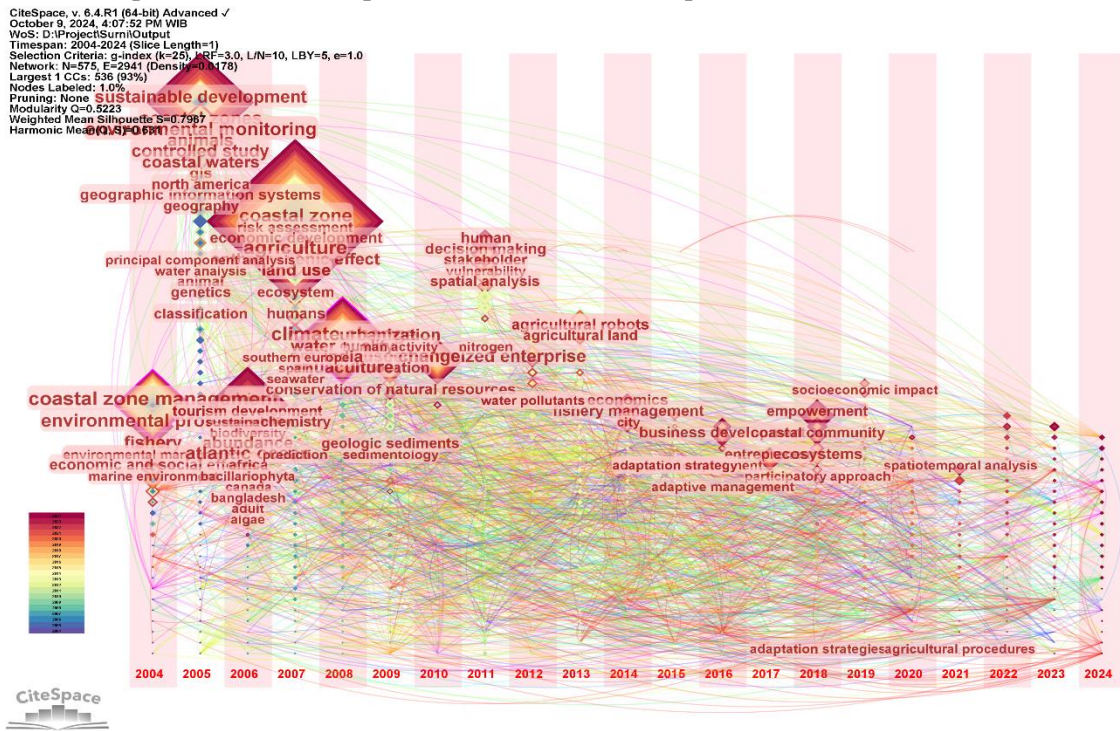


Fig 5. Timezone View of Keyword Entrepreneurship Development in Coastal Communities

Figure 5 shows that the timezone view of keywords in this study spans from 2004 to 2024, showing the evolution of keywords used in the literature related to entrepreneurship development in coastal communities. Each year shows a trend of keywords that dominate the period, with keywords such as “coastal zone management,” “environmental monitoring,” and “sustainable development” appearing as early as 2004 to 2010, while keywords such as “empowerment,” “business development,” and “coastal community” become more prominent in the following years, especially after 2018. These keywords confirm that the research topics related to coastal entrepreneurship are expanding to include aspects of environmental management, community empowerment, and sustainable development over time.

The results of this study show that the focus of entrepreneurship research in coastal communities has shifted from environmental and resource management issues in the early 2000s to social and economic issues such as community empowerment and business development in recent years. This reflects a paradigm shift in research where the role of people and local economic development is increasingly seen as part of the solution to the environmental challenges facing coastal communities. This trend also suggests a more comprehensive approach to coastal entrepreneurship that integrates social, economic, and environmental factors.

The findings of this study confirm that the literature on entrepreneurship development in coastal communities has undergone a significant shift. While previous research tended to focus on environmental issues and natural resource management, the findings indicate a broadening of attention to social empowerment and economic development of coastal communities (Dupai et al., 2019; House et al., 2011). As such, this research provides new insights into understanding how entrepreneurship can be an effective tool to enhance the resilience of coastal communities to environmental change while promoting their social and economic well-being.

Evolution of Research Topics

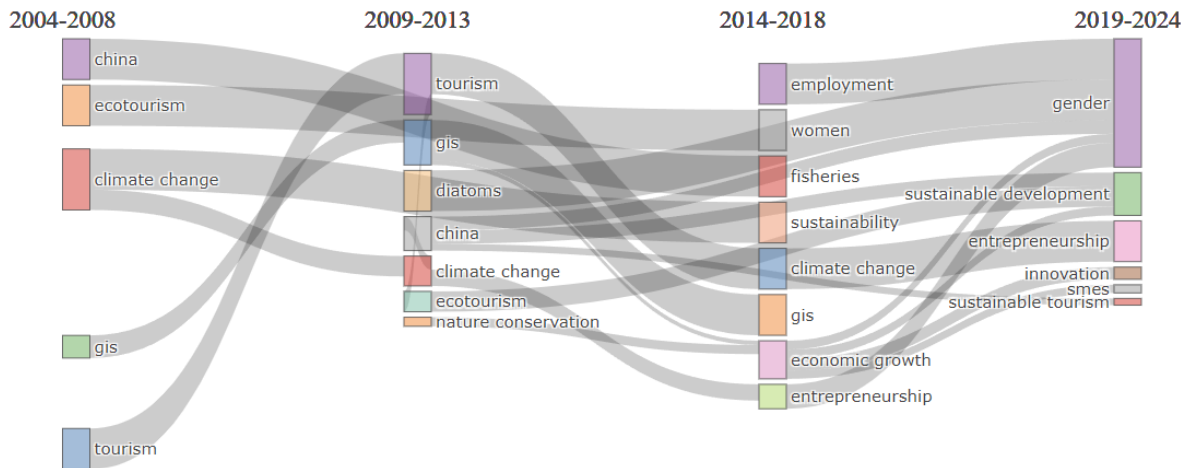


Fig 6. Thematic evolution of entrepreneurship development in coastal communities

Figure 6 shows the evolution of this research topic, delineating four distinct periods: 2004-2008, 2009-2013, 2014-2018, and 2019-2024. Each period demonstrates a shift in the focus of research topics about entrepreneurship development in coastal communities. In the initial period (2004-2008), the prevailing subjects were “China,” “ecotourism,” and “climate change.” Subsequently, the focus shifted to “tourism,” “GIS,” and “nature conservation” during the 2009-2013 period and expanded to encompass “sustainability,” “fisheries,” and “economic development” during the 2014-2018 period. In the most recent period (2019-2024), a greater focus on contemporary issues has emerged, with the emergence of new keywords such as “gender,” “innovation,” and “sustainable tourism.” These keywords substantiate the assertion that the evolution of research topics mirrors the evolving issues and priorities in entrepreneurship development in coastal communities and the global challenges confronted, including climate change and gender equality.

The results show a notable transition from more conventional subjects, such as ecotourism and climate change, to a heightened emphasis on sustainable development and innovation in entrepreneurship within coastal communities. This research identifies the growing importance of global issues such as sustainability and the role of women in development in the context of entrepreneurship development in coastal areas, particularly in the most recent period. Moreover, the role of the small and medium enterprise (SME) sector as a driver of economic growth in the region has also become more prominent.

This study's findings align with previous research, emphasizing the importance of sustainability in the context of coastal development. Sustainability and innovation as key factors in addressing environmental challenges in coastal areas (Awortwi, 2010; Glavovic, 2013). However, this study extends these insights by highlighting the important role of entrepreneurial innovation and gender equality, which have not been widely discussed in previous studies. Consequently, this research provides new insights into how global issues such as climate change, sustainability, and gender equality can be more deeply integrated into entrepreneurship development strategies in coastal communities.

The implications of women’s empowerment in the Bajo Tribe in Wakatobi Regency

The implications of women's empowerment in the Bajo Tribe in Wakatobi Regency are profound, influencing both the community's socio-economic dynamics and the sustainability of local resources. The role of women in the Bajo Tribe is of great importance, particularly in the context of household

management and the contribution of their activities to the economic development of the community. This is evident in the areas of fisheries, small-scale trading, and traditional craft production. The empowerment of women in the Bajo tribe could result in enhanced economic resilience within the community. This would be achieved by expanding opportunities for women to diversify income sources, which would in turn support family stability and improve quality of life.

Moreover, the process of women's empowerment within the Wakatobi Bajo Tribe has significant implications for the management of natural resources and the sustainability of the environment. Given the Bajo community's significant reliance on marine resources, the involvement of women in decision-making processes concerning fishing practices, conservation initiatives, and the sustainable utilization of resources can facilitate the implementation of more responsible practices that safeguard the delicate marine ecosystem. It can be reasonably assumed that women who have been empowered are more likely to advocate for sustainable practices, thereby ensuring the preservation of the natural resources that their families and communities rely on.

Education and training are essential elements of empowerment, and investment in the education of Bajo women will yield long-term benefits for the community. Access to training in entrepreneurship, financial management, and sustainable fishing methods would equip women with the requisite skills to participate more effectively in the economy. Furthermore, this education can foster awareness of environmental stewardship, which aligns with the Bajo Tribe's traditional respect for the sea and can support sustainable development efforts in Wakatobi.

Culturally, the empowerment of Bajo women may result in a transformation of traditional gender roles, challenging norms that may have historically constrained their public participation. Such a transformation would not only elevate the status of women within their households and communities but also facilitate greater diversity in community leadership. Such diversification can enrich decision-making processes, facilitating the integration of varied perspectives into community planning and environmental conservation strategies. This ensures that the concerns of both women and men are addressed.

The empowerment of women in the Bajo Tribe has the potential to yield a multifaceted impact, encompassing economic, environmental, social, and cultural domains. By integrating women more comprehensively into economic activities and environmental management, the Bajo community can enhance its capacity to withstand external pressures, such as climate change and economic volatility. This process of empowerment can create a cascading effect, as empowered women contribute to the sustainable development of Wakatobi's coastal areas and become role models for future generations, fostering a more inclusive and sustainable society.

IV. CONCLUSION

The research concludes that the development of entrepreneurship in coastal communities, including the Bajo tribe in Wakatobi, plays an important role in improving economic and environmental well-being, with significant implications for women's empowerment. The study findings show that women's involvement in entrepreneurship can increase household income and strengthen the economic resilience of the community, particularly in the fishing and handicraft sectors. In addition, women's empowerment in resource management decision-making has the potential to promote more sustainable practices that meet the long-term needs of coastal communities in the face of environmental change.

From the perspective of public administration theory, the empowerment of women in coastal communities such as the Bajo highlights the importance of inclusive and community-based approaches to policy-making. Putting this theory into practice means that public policies that support entrepreneurship education, skills training and women's access to leadership roles at the community level can make a significant contribution to sustainable development. Interventions that integrate social, economic and environmental aspects in empowerment programmes show that the role of public administration is crucial in creating policies that are holistic, adaptive and appropriate to local needs.

However, this study has several limitations, including limited primary data directly from Bajo women and limited geographical scope in the Wakatobi region. In addition, this research did not fully

consider the different cultural and normative factors in other coastal communities, which may have different needs and challenges. Future research could broaden the scope by including more primary data and cross-community comparative studies to provide deeper insights into the impact of women's empowerment on entrepreneurship development in different coastal communities.

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