

Optimalization the Blue Economy Policy of the Tourism Sector using E-Government in the Coastal Area of Ambon Island

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Abstract. This study was conducted with the objective of investigating and evaluating the optimization of the blue economy policy within the tourism sector by leveraging e-government tools in the coastal region of Ambon Island. Qualitative research employing the case study methodology was employed for this study. The results of this study have unveiled that the current level of e-government adoption in the coastal region of Ambon Island falls short of the desired standards. This is primarily attributed to two pivotal factors. *Firstly*, the Local Government of Ambon City, as represented by the Ambon City Tourism Agency, lacks a dedicated website, application, or dashboard for several crucial purposes. These factors encompass sharing information and knowledge with other government entities, enhancing the dissemination of information and knowledge, fostering greater citizen engagement, bolstering collaboration with the business sector, and attracting potential tourists to Ambon City. *Secondly*, both the Maluku Provincial Government and the Central Government have not provided adequate support or backing for these initiatives. Therefore, this research proposed that: The Ambon City Government should create an e-government platform, which can take the form of a website, platform, or tourism dashboard. This platform should be dedicated to updating and disseminating information and knowledge currently hosted on <https://kemenparekraf.go.id/>. Additionally, efforts should be made to simplify various elements that serve similar functions or contain similar content. The integration of visa and application issuance features from the website <https://visa-online.imigration.go.id/> should be implemented to enhance the existing website <https://www.indonesia.travel/id/>. In addition, improvements should be made to the English language functionality of the website <https://dispar.malukuprov.go.id/>. Also, the Maluku Provincial Government should intensify its promotional efforts for the Beta Maluku Application.

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1. Introduction

The blue economy concept serves as a framework for development of sustainable, encompassing elements such as conservation integration in sustainable resource utilization, extraction of oil and mineral resources, spatial planning, sustainable energy generation, bio-prospecting, and maritime transportation [1]. Given its critical importance, countries, particularly those with naturally marine-based economies, are earnestly striving to harness all available resources and formulate public policies to facilitate the success of the blue economy. In Africa, there is a notable enthusiasm for embracing the concept of the blue economy, both on a domestic and international scale. It has become a key objective in African economic development, and it is now subject to regulation through monitoring and surveillance technologies across various temporal and spatial dimensions [2].

The government of Bangladesh has initiated discussions with stakeholders to unlock the untapped potential of the marine environment. This includes the implementation of innovative solutions aimed at enhancing food security, reducing poverty, generating employment opportunities, and safeguarding ecosystem health and biodiversity [3]. Meanwhile, Commonwealth countries are primarily focusing on institutionalizing their blue economy objectives through a comprehensive array of strategies, plans, and legislation. This approach is driven by the recognition that the blue economy promotes tighter integration across sectoral management [4].

Additionally, the blue economy policy has been instituted to protect the health of the ocean and aid coastal communities in adjusting to climate change in the United States. It has gained prominence as one of the top policy recommendations of 2020 Democratic presidential contender Elizabeth Warren. This approach aims to boost socioeconomic resilience, promote environmental justice, and address social inequality through the blue economy [5]. In the context of Indonesia, the sea plays a pivotal role in the nation's prosperity, serving as the cornerstone of various economic activities under the blue economy framework. These activities encompass capture fisheries, aquaculture, transportation, and coastal tourism. Given Indonesia's extensive territorial waters, which make up three-quarters of its territory, a coastline stretching 108,000 kilometers, and a vast archipelago of over 17,500 islands, the blue economy holds a pivotal role in the nation's economic prosperity [6].

The ocean serves as a substantial asset for Indonesia's tourism sector, making a notable contribution of USD 28.9 billion to the country's GDP in 2021 [7]. Additionally, the Ministry of Tourism and Creative Economy reports that 44% of international tourists who visited Indonesia participated in marine and coastal tourism activities [6]. The considerable potential of the marine tourism sector has been actively promoted through the Government of Indonesia's intervention in its blue economy policy [8–10]. This policy is delineated in both the RPJPN/National Long-Term Development Plan 2005-2025 [11] as well as the RPJMN/National Medium-Term Development Plan 2020-2024 [12]. These two policy frameworks emphasize the crucial role of a well-managed maritime sector in realizing Indonesia's developmental objectives.

The forecasts outlined in RPJPN and RPJMN were subsequently translated into action through the Presidential Regulation of the Republic of Indonesia No. 16 of 2017 on Indonesian Maritime Policy. The objectives of this policy encompass the following: Achieving equitable well-being for coastal communities and small islands; Attaining heightened economic growth and fostering competitiveness within the maritime sector. However, the government's endeavors to harness the potential of the blue economy and its policy interventions have encountered several challenges. These challenges include the development of coastal areas that do not prioritize environmental sustainability [13,14], issues related to access [15], the escalating volume of plastic waste [16], and a lack of public awareness regarding the significance of conserving marine habitats and coastal areas [17,18].

Although existence of numerous challenges, it remains imperative to uphold the blue economy policy, which carries logical implications for implementation across all regions of Indonesia. This is especially true for local government entities situated in coastal areas or those with significant blue economy potential, such as Riau Province, Bali Province, Papua Province, and Maluku Province. Maluku stands out as a province endowed with remarkable maritime attributes, a diverse population, and rich local wisdom. It boasts immense potential, particularly in the expansion of the tourism sector, which could substantially augment the income of its residents. Maluku Province, encompassing approximately 7.6% of land area and 92.4% of sea area, is strategically surrounded by three major Indonesian islands, namely Halmahera, Papua, and Sulawesi. This geographical positioning bestows upon Maluku a pivotal role as Indonesia's maritime axis [19].

Within Maluku Province, Ambon City, characterized by its coastal island features, stands out as a municipal entity with significant promise in the realm of the blue economy, particularly in the tourism sector. Beyond fishing, the nautical tourism sector plays a pivotal role in driving regional income in Ambon [20]. Ambon City boasts a rich historical and cultural heritage, both on a global and national scale [21]. Additionally, coastal tourism on the island of Ambon is renowned for its underwater beauty, rendering it one of Indonesia's foremost destinations for snorkeling and diving enthusiasts [22]. Moreover, data from 2020 indicate that beach tourism constitutes the largest category of tourism offerings in Ambon City, encompassing a total of 42 tourism products across various districts [23].

Table 1. Compilation of Tourism Objects in Ambon City Categorized by District and Type 2020

District	Types of Tourism Objects				Total
	Nature		Culture		
	Seashore	Land	Traditional Ceremonies	Historical/Cultural Sites	
Nusaniwe	15	3	-	2	20
Sirimau	-	3	1	12	16
South Leitimur	19	30	-	15	64
Ambon Baguala Bay	2	2	-	3	7
Ambon Bay	6	3	1	4	14
Total (all District in Ambon City)	42	41	2	36	121

Source: The data has been processed by researchers and is sourced from the Central Bureau of Statistics

Despite Ambon City possessing several significant blue economy potentials, the tourism sector's contribution to Gross Regional Domestic Product (GRDP) only stands at 1.78%, which falls considerably below the national average of 2.4% and lags behind other key sectors such as manufacturing (5.48%) and agriculture, forestry, and fisheries (23.28%) [24]. Management of the tourism sector in Ambon City is still very traditional as well [25,26]. Simultaneously, the coastal community's knowledge and competence in maritime resource management still must be strengthened [1]. As a result, this research was carried out in order to address the problem formulation: how to optimize the blue economy policy of the tourism sector through the use of e-government in the coastal area of Ambon Island?

In late 1990s, the concept of e-government emerged as a significant development in the field of public administration [27]. However, during its inception, it was not distinctly defined or comprehensively understood by scholars and practitioners in the realm of public administration. Governments worldwide have since dedicated substantial efforts to implement e-government services across various sectors, including tourism [28]. E-government holds the potential to introduce beneficial transformations and enhance the overall visitor experience in tourism, spanning the post-trip phases, during-trip, and pre-trip [27].

Research on the implementation of e-government in diverse areas of government operations is not a novel subject. For instance, studies have examined public perceptions regarding the adoption and implementation of e-government in healthcare [29,30]. Additionally, there has been research on the role of e-government in aiding governments in mitigating and curbing corruption [31–33]. Moreover, e-government has been investigated in the context of government activities within the realms of economics and development [34,35]. E-government, on the other hand, has been explored in the context of educational issues [36,37]. There is yet to be an in-depth study that discusses the use of e-government in the tourism sector based on these studies. Notably, prior research in this area has not employed the public policy paradigm as an analytical methodology. Furthermore, the Ambon Island coastal region has never been employed as a study site in prior research endeavors. Consequently, these three facets represent innovative dimensions in the scope of this study.

2. Research Method

This research falls under the area of qualitative research, and the method employed is the case study approach. Meanwhile, the data employed in this study was a combination of primary and secondary sources. This study used three of the six types of data collecting in case studies identified by Yin [38]. The three distinct sources of data in this study are delineated as follows: 1) Observation: Digital observation constitutes the method employed in this study. Digital observation involves the systematic monitoring of various digital sources, including websites such as the Ministry of Tourism and Creative Economy (TCE), the Maluku Provincial Government, and Wonderful Indonesia, among others. Additionally, digital observation encompasses the scrutiny of the Instagram account maintained by the Ambon City Tourism and Culture Agency, as well as applications accessible on the Google Play Store; 2) Archival Materials: The study also relies on archival materials encompassing various sources; and 3) Documentation: The primary source of documentation for this study is derived from statutory and regulatory documents, along with records from previous research available in books, conference proceedings, and journal articles. These sources are directly related to the two core subjects under investigation in this study: blue economic policies within the tourism sector and e-government initiatives. To execute data analysis, this study adopts the data analysis methodologies recommended by Robert E. Stake for case study research [39]. These methodologies entail a sequence of steps, namely data classification, direct interpretation, pattern development, and the identification of equivalences among two or more categories. Furthermore, this approach facilitates the formulation of naturalistic generalizations. The data analysis in this study is further elaborated through the utilization of the e-government interactions framework within the tourist domain, as developed by Kalbaska et al. [27]. Four of the six dimensions within this framework are employed for the purpose of this study:

Table 2. The Framework for E-Government Relationships in the Tourism Domain

E-Government Relationship	Description	Example in Tourism
Government to Government (G2G)	Includes interactions with other governments and public administration bodies, operating within the same country or outside	Online tourism statistics, destination management systems
Government to Citizens (G2C)	Includes interactions with citizens living in the concerned country, region or other administrative unit	Online travel safety portal, crowdsourcing ideas for tourism
Government to Businesses (G2B)	Involves interactions with businesses that are functioning within the jurisdiction of the public administration	Online tax payment service, publishing government laws via internet media, shared e-commerce platforms
Government to Visitors (G2V)	Involves individuals who are visiting the state, for instance international travellers	Mobile apps providing guidance and cultural references to visit touristic places in a city, visa informational services

Source: Kalbaska, et.al, (data processed by researchers)

3. Results and Discussion

3.1 G2G (Government to Government)

These interactive relationships can manifest at different levels of government, spanning national, provincial, and local tiers, and may involve various departments and agencies within and outside the same country. Their collective goal is to work cohesively to provide services such as facilitating and sharing information among government organizations [27].

Given the specific focus of this research on the case study of the Ambon Island coastal area, the examination of e-government implementation within the context of G2G relationships commences at the national level. In this regard, policymakers and authorities in the tourism sector are categorized into two distinct entities operating within the G2G dimension at the national and provincial levels. The first entity operates within the central government, specifically the Ministry of TCE.

The formation of the Ministry is in accordance with Presidential Regulation No. 96 of the Republic of Indonesia concerning the Ministry of Tourism and Creative Economy [40]. Moreover, at the national level, the utilization of e-government within the framework of the G2G dimension is realized through the website: <https://kemenparekraf.go.id/>. This website is under the supervision of the Ministry of TCE. Local government entities, including the Government of Maluku Province and Ambon City, can access a diverse range of information and knowledge through this platform, encompassing:

Table 3. Aspects of the Information and Knowledge Resources within the Tourism Sector Administered by the Ministry of Tourism and Creative Economy

Types of Information & Knowledge	Content of Information & Knowledge	Status
Publication of International Tourist Visitation Statistics	This publication contains the development of arrival of foreign tourists to Indonesia which includes the number of visits by foreign tourists by entry point, Nationality and visit patterns	Updated
Publication of Passenger Exit Survey	This publication contains profiles of foreign tourists visiting Indonesia, including demographic profiles, travel patterns, expenditure patterns, and opinions of foreign tourists	Not updated (last publication in 2016)
National Tourist Profile Statistics	This publication contains the purpose of the trip, the accommodation used, the length of trip, and the average expenditure related to travel made by Indonesian peoples within the territory of Indonesia	Not updated (last publication in 2018)
National Tourism Satellite Balance	This publication contains the information about the structure of tourism consumption, investment value, and promotions in the tourism sector in the current year. In addition, the publication also provides information on the structure of the workforce in industries related to tourism, such as the business of providing accommodation, travel services, and restaurants	Not updated (last publication in 2017)
Standard Classification of Indonesian Business Fields Tourism and Creative Economy	This publication provides information about an overview of tourism and creative economy activities that are useful as a basis for the preparation and implementation of government activities, as well as other stakeholders (particularly Local Government), including in formulating various policies and activities in the field of Tourism and Creative Economy	Updated

Source: <https://kemenparekraf.go.id/>

In the meantime, the second entity's scope encompasses the Tourism Agencies in each Local Government, both Provincial or Municipal. At the Provincial level, there is the Maluku Provincial Government which supervises the Ambon City Government. Maluku Provincial Government has Tourism Agency, and operationally e-government tool in Maluku Province can be found on the website: <https://dispar.malukuprov.go.id/>. However, the website has not been integrated with the Ministry of TCE, because it is more intended for citizens and visitors. The form of information interaction between Maluku Provincial Government and Central Government (Ministry of TCE) related to the tourism sector is only found in the Regional Government Performance Accountability Report which is usually only reported once a year.

Additionally, at the municipal level, Ambon City Local Government has established a Tourism Agency known as the "Tourism and Culture Agency". However, within the framework of Government-to-Government (G2G) e-government initiatives, it is noteworthy that the Ambon City Government, represented by the Ambon City Tourism Agency, does not possess a dedicated website, platform/dashboard specifically designed for the purpose of exchanging information and expertise with other government entities. Remarkably, the Ambon City Tourism Agency is one of six agencies within Ambon City that do not currently maintain a website or application [41].

Based on the data presented above, it can be deduced that, the Ministry of Tourism and Creative Economy is not yet optimal. This deficiency arises from the fact that certain tools facilitating the exchange of information and knowledge with other government institutions have not been fully updated. As indicated in Table 3, only two out of the five features have undergone upgrades, and these are regularly maintained. Furthermore, certain elements exhibit similar functions and content, such as the publication of international tourist visitation statistics and the dissemination of passenger exit surveys, both of which emphasize tourism data from the perspective of foreign tourists.

In light of these findings, the Ministry of TCE should be takes measures to update the information and knowledge presented on the <https://kemenparekraf.go.id/> website. Furthermore, simplification of certain features with overlapping functions or content should be considered for enhanced efficiency and clarity.

In the meantime, e-government tool of Maluku Provincial Government (that manifested in the website: <https://dispar.malukuprov.go.id/>) which has not been integrated with the Central Government (Ministry of TCE), and information interaction between Maluku Provincial Government and Central Government which limited to the Regional Government Performance Accountability Report, is the 2 biggest challenges for the Maluku Provincial Government in the G2G relationship. Therefore, Maluku Provincial Government needs to initiate the integration of the website with the Ministry of TCE, and the Ministry of TCE needs to provide optimal support to make it happen.

In the meantime, in the Government-to-Government context in level of local, in 2014 an initial stride towards integrated maritime governance, encompassing the tourism sector, was initiated. During this period, authority over maritime areas was transitioned from municipal governments to provincial governments. Consequently, the Central government now holds jurisdiction beyond the 12-nautical-mile boundary, while the Provincial government has authority over the region within 0 to 12 nautical miles from the shoreline. Municipal governments retain their competency in preserving coastal management and planning expertise [1].

Given these circumstances, it is imperative that the Ambon City Government places increased emphasis on the coastal tourism sector. However, the prevailing situation reveals that the Ambon City Tourism and Culture Agency is deficient in possessing an e-government tool in the form of dashboard, platform/website that could function as a platform for disseminating information and expertise. In light of this, it is essential for the Ambon City Government to establish an e-government instrument, such as a website, platform, or tourism dashboard, which integrates seamlessly with both the Provincial Government and the Central Government. This integrated system would facilitate the continuous and collective monitoring and assessment of developments within the tourism sector, particularly within the Ambon Island coastal area.

3.2 G2C (Government to Citizens)

A mature electronic government system is characterized by its citizen-centric approach to integrated e-government services [42]. The Government-to-Citizen (G2C) interaction aims to establish and maintain direct communication toward the citizens. Additionally, it seeks to enhance relation within the citizens and government through utilization of digital technology [43].

However, in operational terms, the utilization of e-government within the G2C framework in Ambon City, specifically for the promotion of tourism in its coastal areas and the enhancement of citizen engagement in exploring these regions, has not been effectively implemented. This deficiency stems from the absence of a dedicated dashboard, platform, or website provided from Local Government of Ambon City, for the dissemination of knowledge and information related the sector of tourism (particularly coastal areas). The

efforts made by the Ambon City Government to promote tourism in the coastal regions to its residents limited to the use of the Instagram account of Ambon City Tourism and Culture Agency's:

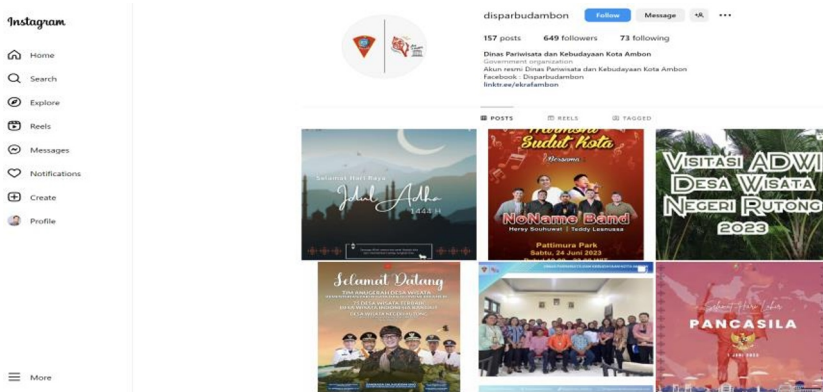


Fig 1. The official Instagram account managed by the Ambon City Tourism and Culture Agency

The Local Government of Maluku Province, who holds jurisdiction over Ambon City, actively manages an e-government relationship aimed at amplifying the sector of tourism within the coastal area in Ambon City through the utilization website (<https://dispar.malukuprov.go.id/>) and application known as “Beta Maluku” which is accessible via the Google Play Store.

The website serves as a comprehensive repository of information and knowledge pertaining to the tourism sector across all 11 municipalities within Maluku Province, Ambon City included. This repository includes details on tourism attractions in the 11 municipalities of Maluku Province, visitor data encompassing both local and international tourists, as well as information on accommodations, including hotels, flight options, and maritime transportation.

Furthermore, it offers insights into the creative economy within Maluku Province. Conversely, the Beta Maluku application offers a range of features, including information on tourism destinations, events, festivals, culinary offerings, and more, spanning all municipalities within Maluku Province. This comprehensive resource is elaborated further in Figure 2 below:

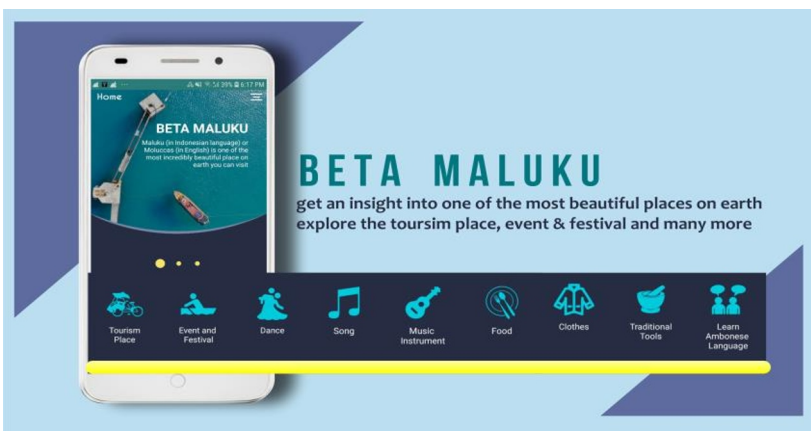


Fig 2. Beta Maluku Application

Based on the data presented above, it is evident that the Local Government of Ambon City hasn't yet to develop or implement effective solutions of e-government within the Government-to-Citizen (G2C) dimension. This deficiency arises from the limited scope of knowledge and information dissemination associated with the sector of tourism in Local Government of Ambon City. In June 20, 2023, this Instagram account boasts only 649 followers and lacks verification, despite the fact that Ambon City's population stands at 348,235 residents [44]. Consequently, the Instagram account caters to a mere 0.18% of Ambon City's total population in terms of followers. In light of the rapid pace of digitization and the prevalent use of social media in contemporary times, these empirical findings are deeply concerning.

Conversely, although the Maluku Provincial Government, which supervises Ambon City, has made efforts to incorporate diverse information and knowledge pertaining to the tourism sector across the 11 municipalities through the platform of <https://dispar.malukuprov.go.id/> and the Beta Maluku application, these endeavors have not yielded comprehensive results. This observation can be assessed from at least two perspectives: Firstly, the information presented on the website regarding tourism attractions in Ambon City's coastal area is notably limited, featuring only 19 promoted tourism objects, whereas Table 1 above indicates that Ambon City boasts 42 tourism attractions with coastal characteristics. This implies that only 45% of the coastal tourist attractions in Ambon City are accessible to citizens via the website <https://dispar.malukuprov.go.id/>. Secondly, the website exclusively provides accommodation information, encompassing hotels, flights, and maritime transportation. However, there are several well-established applications offering accommodation information, such as Goibibo, Agoda, Tiket.com, Pegipegi and all readily available on the Google Play Store.

In light of these findings, it is imperative for Local Government of Ambon City to establish its own e-government tool, be it in the form of a website, platform, or dashboard, equipped with features designed to enhance the dissemination of information and knowledge, foster public engagement, and stimulate citizen interest in exploring the coastal areas of Ambon Island. The Ambon City Government can draw valuable lessons from best practices implemented in other municipalities globally, exemplified by cities like Marseille with <https://www.marseille-tourism.com/en/> and Nagoya with <https://www.nagoya-info.jp/en/>, which provide a comprehensive array of knowledge and information related to the tourism sector, encompassing tourist attractions, photogenic locations, events, culinary offerings, accommodation options, and transportation access.

Also, there is a need to increase the status of Instagram account to be verified account as well as promoting it to citizens. In case the management of the e-government tool remains under the Maluku Provincial Government management, then website contents <https://dispar.malukuprov.go.id/> needs to be updated/developed to accommodate 42 tourism objects with seashore characteristics in Ambon City (especially in coastal areas), and increase the choice of e-commerce applications of the tourism sector.

3.3 G2B (Government to Businesses)

Government-to-Business (G2B) interactions encompass engagements between public authorities and profit-oriented enterprises operating in the tourism sector, including those involved in transportation, hospitality, catering, entertainment, and related services within the jurisdiction of the governing authority. As a result, governments should offer a range of essential online services to businesses, encompassing online tax payment facilities, the dissemination of government laws via internet platforms like websites and mobile apps, and functioning as a facilitator for businesses and other stakeholders to participate in the collaborative generation of public value and public services. The overarching aim of these

services is to foster the sustainable development of the tourism industry within a particular region or country through Government-to-Business (G2B) collaborations [27,43].

Concerning the execution of e-government in tax payment services, the Ambon City Government has instituted a system for online payment of local taxes and levies imposed on businesses, encompassing those within the tourism sector, such as hotel taxes, restaurant taxes, and entertainment taxes. The particulars of this provision are elaborated in Article 13 of Ambon Mayor Regulation Number 24 of 2022, titled "Guidelines for the Implementation of Regional Tax Collection Using the Self-Tax Calculating System." [45]. This regulation streamlines the tax and local levy payment process for tourism businesses, enhancing convenience and efficiency.

Simultaneously, as part of the broader e-government implementation, the Local Government of Ambon City has facilitated legal documents publication on the Legal Documentation and Information Network, commonly referred "JDIH", accessible through the webpage(<http://jdih.ambon.go.id/>). This online platform allows business entities, including those operating in the tourism sector, to access a comprehensive repository of legal documents related to business operations. These documents encompass crucial information, including the terms and conditions for operating a tourism business, licensing service prerequisites, and details regarding taxation policies and penalties within Ambon City.

In terms of e-government implementation through the government's role as a platform provider, fostering collaboration with businesses and other stakeholders to jointly create public value and public services, the Ambon City Government presently does not possess a dedicated platform specifically tailored for the collaborative development of public values and services in partnership with business entities operating within the tourism sector. The city has a single e-procurement platform, primarily geared towards electronic procurement of goods and services across various government sectors, not exclusively tourism-related. This platform is accessible at the following webpage(<http://lpse.ambon.go.id/>).

In contrast, at the level of Province (the case of Maluku Province), the situation is relatively more advanced. The webpage(<https://dispar.malukuprov.go.id/>) already incorporates collaborative e-commerce features that bridge the Maluku Provincial Government and the business sector, exemplified by partnerships with platforms such as Traveloka. This collaboration facilitates online sales of airplane tickets and hotel accommodations within Local Government of Maluku Province.

Based on data presented, it can be deduced that within the Government-to-Government context, the tax payment services are notably robust, as they have integrated mechanisms for online tax and local levy payments for commercial organizations through the internet. The existence of policy products, as outlined in Mayor Regulations, plays a pivotal role in reinforcing the effectiveness of this mechanism. Similarly, in the domain of publishing local government laws through internet channels, the performance is commendable. The presence of the website: <http://jdih.ambon.go.id/> simplifies the accessibility of law products, especially those related to tourism regulations in Ambon City, for business actors and entities.

These factual findings still can be continually improved by development of online tax payment facilities periodically, and updating publication of local government laws soonest on <http://jdih.ambon.go.id/>. In addition, information regarding the availability of online tax payment facilities and publication of local government laws needs to be amplified to the public (particularly tourism business peoples) periodically.

In contrast, the very limited scope for co-creating public value and public services through the platform available at <http://lpse.ambon.go.id/> significantly diminishes the Ambon City Government's role as a platform provider, hindering the potential for collaboration between the government and business entities. This limitation underscores the necessity for the Ambon City Government to fortify its support and collaboration with the

tourism sector businesses by establishing dedicated websites, platforms, or dashboards and broadening the spectrum of co-creation of public value and services. This expansion should not be confined solely to e-procurement but also encompass initiatives such as shared e-commerce platforms for online hotel room bookings within the coastal areas of Ambon Island.

Collaboration between government and businesses in the tourism sector holds paramount significance, especially in terms of its economic impact. As indicated by the World Travel & Tourism Council Report for the year 2022, the tourism sector in Indonesia makes a significant contribution, amounting to USD 28.9 billion, equivalent to 2.4% of the country's GDP. Furthermore, the tourism industry has generated employment opportunities for approximately 10.95 million individuals in Indonesia. These figures place Indonesia in the third position globally for the highest employment rate generated by the tourism sector, following India and China [7].

3.4 G2V (Government to Visitors)

Government-to-Visitor (G2V) interactions encompass the relationships between government officials and visitors, which may include individuals from other countries or territories who are not residents of the country or territory under the government's authority, including both national and international tourists. G2V services encompass instructional offerings that educate tourists on navigating the visa application and issuance processes, country or territory, online booking options for National Park or cultural event admissions, and other services that primarily focus on online marketing within the context of National or Local tourism. In this domain, technological advancements should be effectively harnessed, especially in providing online information and digital marketing to prospective tourists. As part of G2V interactions, governments may employ communication campaigns aimed at enhancing the online tourism reputation of their country or locality and gathering feedback from travellers [46].

The utilization of e-government in G2V relationships for tourist attraction purposes, particularly for international tourists, at the national level in Indonesia, is showcased on the website: <https://www.indonesia.travel/id/>. This platform offers informative services that guide visitors on navigating Indonesia and exploring tourism features in various regions, including the Ambon Island coastal area. Additionally, it features language selection options in 21 languages, allowing international tourists to freely browse content in their preferred language. However, it should be noted that the website does not provide a application of visa and issuance service, which available (separately) at [:https://visa-online.imigration.go.id/](https://visa-online.imigration.go.id/). Unfortunately, there is no integration between this visa service and <https://www.indonesia.travel/>. Furthermore, the website does not offer online booking services for National tourism at various tourist destinations, including priority tours and nearby accommodations.

In the meantime, at the provincial level, specifically within Maluku Province, the utilization of e-government in Government-to-Visitor (G2V) interactions for tourism promotion is facilitated through the website: <https://dispar.malukuprov.go.id/> and the Beta Maluku application. The website encompasses a range of informational elements related to tourism in municipalities within Maluku Province and provides language options in Indonesian, English, and Arabic for exploring its content. It should be noted, however, that among these language options, only the Indonesian and Arabic versions are operational, as the English option does not function correctly—when selected, the website continues to display content in Indonesian. Moreover, the Beta Maluku application has not been optimally utilized, with research findings indicating that it has been downloaded approximately 1000 times from the Google Play Store.

On the other hand, advance e-government has not been accommodated/created at the local level (Ambon City). Because there is no unique website/platform/dashboard with tourism content to attract more prospective/tourists, particularly in the Ambon Island coastal area. In G2V relations, the Ambon City tourist promotion is limited to Instagram social media (as indicated in Figure 1). While several researchers, including Werkentin, Margariti et al., and Hasenzahl, emphasize the involvement of the central/national government in discussions related the utilization of e-gov in Government-to-Citizen (G2C) relationships [46–48], other scholars, such as Schwendener and Kalbaska et al., advocate for a more proactive role for local government in leveraging e-government within the tourism sector for G2C interactions [43,49].

According the provided data, it can be analyzed that within the Government-to-Citizen (G2C) dimension at the national level, even though there is already a website: <https://www.indonesia.travel/id/>, but it should still be improved by provision of visa and issuance application features on the website which integrated with the website: <https://visa-online.imigration.go.id/>. In addition, the website should also be able to accommodate the provision of online booking services for National tourism at several tourist spots and surrounding hotels. In case this requires a very large effort, Central Government (Ministry of TCE) can collaborate with related (e-commerce) service providers, e.g: Tripadvisor.

At the provincial level, the optimization of e-government in Government-to-Visitor (G2V) interactions can be achieved through enhancements to the English language functionality of the website: <https://dispar.malukuprov.go.id/>. Furthermore, the Maluku Provincial Government should intensify its promotional efforts for the Beta Maluku Application during events that attract large audiences, thereby increasing awareness among potential tourists and encouraging them to download it from the Google Play Store.

Conversely, at the local level, specifically within the Ambon City Government, there has been a lack of proactive engagement in harnessing e-government for the advancement of the tourism sector, particularly within the Ambon Island coastal area. Consequently, the Ambon City Government should take a more active role in introducing the coastal tourism offerings to prospective tourists as a means to attract them to Ambon City. In light of this, the establishment of an e-government website, platform, or dashboard becomes imperative.

Noteworthy international examples of municipalities successfully optimizing e-government in G2V interactions that Ambon City could consider emulating include City of Jeju(<https://m.visitjeju.net/en>) and City of Brisbane(<https://visit.brisbane.qld.au/>). These instances provide valuable insights for Ambon City in its pursuit of e-government excellence in the G2V context.

4. Conclusion

As per the findings and discussions presented above, this study has identified that the current utilization of e-government in the coastal areas of Ambon Island is not operating at its full potential. The analysis, covering four dimensions (G2G, G2C, G2B, and G2V), has revealed that this issue primarily stems from two key factors: *First and foremost*, the Local Government of Ambon City lacks a dedicated website, application/dashboard for several critical purposes. These include sharing knowledge as well as information with other government entities, amplifying information and knowledge dissemination, enhancing citizen engagement, strengthening support and collaboration with the business sector, and attracting prospective tourists for the tourism sector in Ambon City, especially within the coastal areas of Ambon Island. *Secondly*, the Maluku Provincial Government and the Central Government (specifically the Ministry of Tourism and Creative Economy) have not provided adequate support or backup. This assertion is substantiated by the following research findings: 1) Several pieces of information and knowledge contained within

<https://kemenparekraf.go.id/> remain incomplete and exhibit redundant functions/content; 2) The website <https://www.indonesia.travel/id/> lacks a visa and issuance application, and it has not yet been integrated with the immigration system. These identified shortcomings indicate the need for substantial improvements in the e-government infrastructure and support mechanisms to optimize the utilization of e-government in the coastal areas of Ambon Island; 3) The English language option on website: <https://dispar.malukuprov.go.id/> does not work; and 4) The application in Beta Maluku has also not been utilized optimally due to the application has only been downloaded around 1000 times/users on the Google Play Store.

Based on these findings, this study recommends several things: The Ambon City Government should establish an e-government tool in the form of a website, platform, or tourism dashboard. This tool should be seamlessly integrated with both the Provincial Government and the Central Government, particularly in order to optimizing four dimensions of e-government relations, updating the information and knowledge contained in <https://kemenparekraf.go.id/> and simplify several features have similar functions/content, development the website: <https://www.indonesia.travel/id/> through provision of visa and issuance application features on the website which integrated with the website: <https://visa-online.imigration.go.id/>, improving the English function on the website: <https://dispar.malukuprov.go.id/>, expanding the network in utilizing of e-government by empowering the private sector more within the framework of a public private partnerships, also Maluku Provincial Government needs to campaign more for the Beta Maluku application on various occasions that bring large peoples.

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